

W A  
32  
AM8  
B6c  
1946

# MISSOURI PUBLIC HEALTH MANUAL

Control of Communicable and Other  
Diseases Dangerous to Public Health



## BOOK IV

R. M. JAMES, M.D.  
*State Health Commissioner*

THE  
STATE BOARD *of* HEALTH *of* MISSOURI  
JEFFERSON CITY

1946



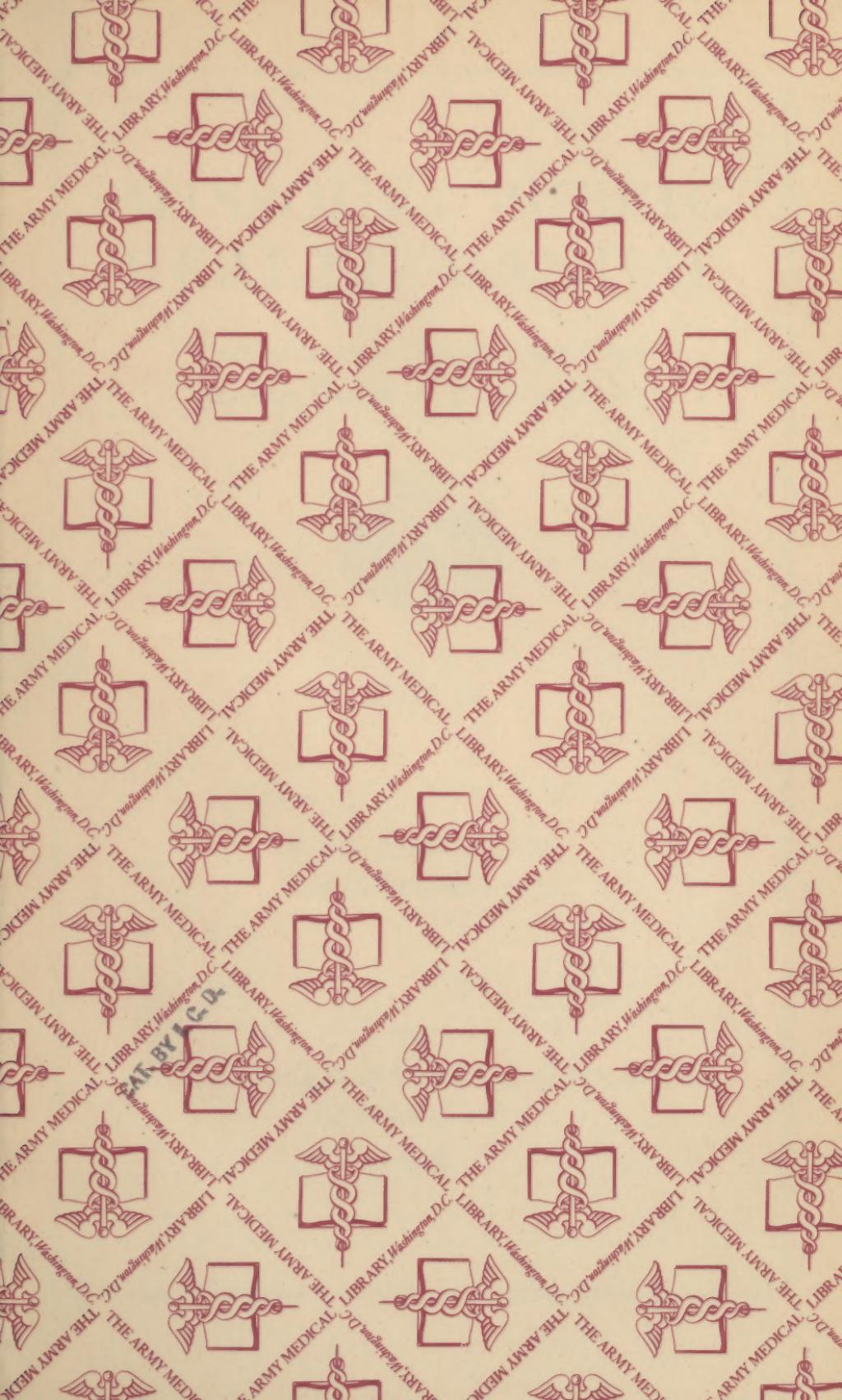
29211670R

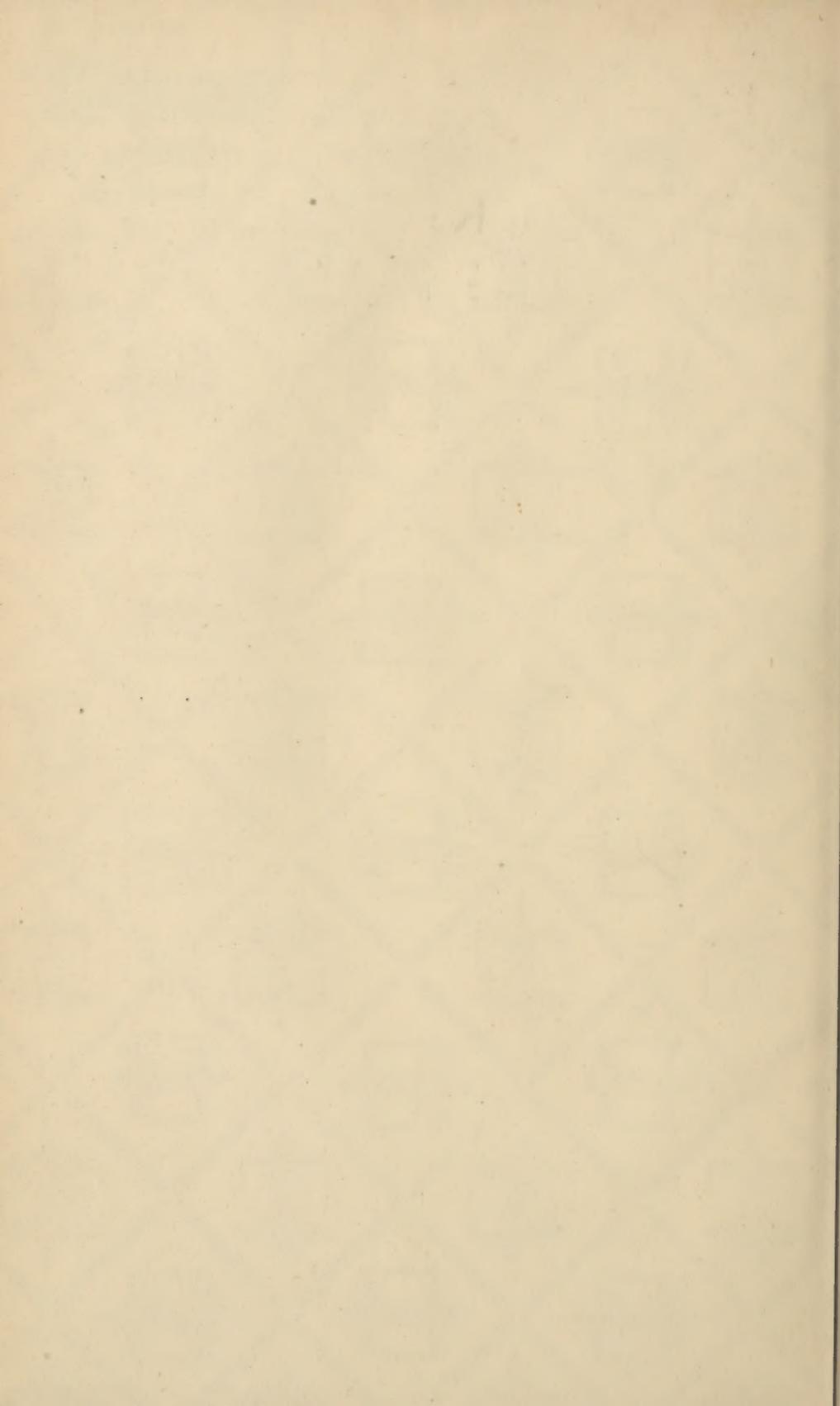


5 09963150 MNL

NATIONAL LIBRARY OF MEDICINE







Missouri Board of Health

# MISSOURI PUBLIC HEALTH MANUAL

Control of Communicable and Other  
Diseases Dangerous to Public Health



## BOOK IV

R. M. JAMES, M.D.

*State Health Commissioner*

1946  
THE  
STATE BOARD *of* HEALTH *of* MISSOURI  
JEFFERSON CITY

1946

WA  
32  
AM8  
B6c  
1946

X48943

MID-STATE PRINTING CO., JEFFERSON CITY, MO.



1000

## REGULATIONS FOR THE PREVENTION AND CONTROL OF COMMUNICABLE DISEASES.

---

(In accordance with the powers granted under Chapter 57,  
Article 1, Revised Statutes, 1939.)

BE IT RESOLVED, By the State Board of Health of Missouri in session at Jefferson City, Missouri, May 20, 1946, that the following be and are hereby adopted:

C. H. NEILSON, M. D.  
*President*

R. M. JAMES, M. D.  
*Secretary*

(3)

430972

## PERSONNEL OF BOARD.

**MISSOURI PUBLIC HEALTH MANUAL**  
**TABLE OF CONTENTS.**

---

**BOOK IV**

---

		<b>Page</b>
<b>SECTION</b>	<b>I.</b> Reportable Diseases.....	8
	Division A.....	8
	Divisions B, C, D.....	9
<b>SECTION</b>	<b>II.</b> Records and Reports.....	10
<b>SECTION</b>	<b>III.</b> Definitions.....	11
<b>SECTION</b>	<b>IV.</b> Precautionary Measures.....	13
<b>SECTION</b>	<b>V.</b> Diagnosis.....	19
	Placard.....	20
	Isolation.....	21
	Quarantine Procedure.....	20, 21
<b>SECTION</b>	<b>VI.</b> State Board of Health May Adopt Special Measures.....	22
<b>SECTION</b>	<b>VII.</b> Specific Measures for the Control of Diseases Enumerated in Section I, Division A.....	23
<b>SECTION</b>	<b>VIII.</b> Specific Measures for the Control of Diseases Enumerated in Section I, Division B.....	57
<b>SECTION</b>	<b>IX.</b> Specific Measures for the Control of Diseases Enumerated in Section I, Division C.....	63
<b>SECTION</b>	<b>X.</b> Specific Measures for the Control of Diseases Enumerated in Section I, Division D.....	64
<b>SECTION</b>	<b>XI.</b> Diseases in Animals.....	64
<b>SECTION</b>	<b>XII.</b> Disinfectants and Insecticides.....	65
<b>SECTION</b>	<b>XIII.</b> Care and Use of Biologicals.....	69



## MISSOURI PUBLIC HEALTH MANUAL.

---

### BOOK IV.—REPORTABLE DISEASES.

**Authority.** Revised Statutes 1939, Section 9736. Designate Diseases, Rules and Regulations.—The board shall designate those diseases which are infectious, contagious, communicable, or dangerous in their nature and shall make and enforce adequate rules, regulations and procedures to prevent the spread of those diseases and to determine the prevalence of said diseases within the state.

**Penalty for Violation.** Revised Statutes 1939, Section 9750. Any person or persons violating, refusing or neglecting to obey the provisions of this article or any of the rules and regulations or procedures made by The State Board of Health in accordance with this article, or who shall leave any pest-house, or isolation hospital or quarantined house, or place without the consent of the health officer having jurisdiction, or who evades or breaks quarantine or knowingly conceals a case of contagious, infectious, communicable or dangerous disease, or who removes, destroys, obstructs from view or tears down any quarantine card, cloth or notice posted by the attending physician or health officer, or by direction of a proper health officer, shall be guilty of a misdemeanor.

**Duties and Jurisdiction of Local Health Officers.** Revised Statutes 1939, Section 9747. Duties and Jurisdiction of Deputy State Commissioner of Health—Penalty for Violation.—It shall be the duty of the deputy state commissioner of health for the counties to enforce the rules and regulations of The State Board of Health throughout their counties outside of incorporated cities which maintain a health officer who has been appointed a deputy state commissioner of health as provided for in Session Acts, 1933, Section 9025. The deputy state commissioner of health for incorporated cities of less than 75,000 population shall enforce the rules and regulations of The State Board of Health within their respective cities. Any deputy state commissioner of health who neglects or refuses to perform his duties as required by this article shall be deemed guilty of a misdemeanor. In case of dereliction of duty or refusal to act on the part of the deputy state commissioner of health of any county, The State Board of Health may at their discretion declare the office of deputy state commissioner of health for that county vacant.

**Repeal of all Prior Rules and Regulations.** All rules and regulations of The State Board of Health of Missouri previously adopted which are in conflict with the provisions of these rules and regulations are hereby repealed.

If for any reason any rule or regulation or any part thereof is held to be unconstitutional or invalid, then that fact shall not invalidate any other part of these rules and regulations, but the same shall be enforced without reference to the part so held to be invalid.

**Change Rules and Regulations.** The State Board of Health may at any time revise these rules and regulations, suspend their action, or issue supplements to these rules and regulations.

**Rules and Regulations Prescribed to Supersede.** R. S. 1939, Section 9748. All rules and regulations authorized and made by The State Board of Health

in accordance with this chapter shall supersede as to those matters to which this article relates, all local ordinances, rules and regulations and shall be observed throughout the state and enforced by all local and state health authorities. Nothing herein shall limit the right of local authorities to make such further ordinances, rules and regulations not inconsistent with the rules and regulations prescribed by The State Board of Health which may be necessary for the particular locality under the jurisdiction of such local authorities.

**Cities Having a Population of 75,000 or Over Excepted.** R. S. 1939, Section 9749. Nothing in this article shall apply to cities which now have, or may hereafter have, a population of 75,000 or over who are maintaining organized health departments: *Provided*, that such cities shall furnish The State Board of Health reports of contagious, infectious, communicable or dangerous diseases, which have been designated by them as such, and such other statistical information as the board may require.

---

## SECTION I.

### REPORTABLE DISEASES.

In accordance with authority (Revised Statutes 1939, Section 9736), conferred on The State Board of Health of Missouri, the following diseases are declared to be communicable or otherwise dangerous to public health. They shall be reported and controlled in the manner hereinafter provided.

#### DIVISION A.

##### Diseases Communicable and Dangerous to Public Health.

- Actinomycosis
- Acute Infectious Conjunctivitis
- Anchylostomiasis
- Anthrax
- Chicken Pox
- Cholera
- Dengue
- Diphtheria
- Dysentery (amebic)
- Dysentery (bacillary)
- Encephalitis, Infectious
- Favus and Ringworm of Scalp
- German Measles
- Glanders
- Influenza (epidemic)
- Kerato conjunctivitis
- Leprosy
- Malaria
- Measles
- Meningococcus Meningitis
- Mumps
- Paratyphoid Fever
- Plague
- Pneumonia, Pneumococcal
- Pneumonia, Primary Atypical
- Poliomyelitis (acute anterior)
- Psittacosis

Puerperal Infection  
Rabies  
Rocky Mountain Spotted Fever  
Scarlet Fever  
Septic Sore Throat  
Smallpox  
Tetanus  
Trachoma  
Trichinosis  
Tuberculosis (pulmonary)  
Tuberculosis (other than pulmonary)  
Tularemia  
Typhoid Fever  
Typhus Fever  
Undulant Fever  
Whooping Cough  
Yellow Fever

**DIVISION B.****Diseases Communicable and Dangerous to Public Health.**

Chancreoid  
Gonorrhea  
Lymphopathia venereum  
Granuloma inguinale  
Syphilis

**DIVISION C.****Diseases Dangerous to Public Health.**

Beriberi  
Botulism (food poisoning)  
Pellegra  
Scurvy

**DIVISION D.****Diseases Dangerous to Public Health.**

1. Occupational Dermatitis (Dermatoses)
2. Pneumoconiosis
  - Silicosis
  - Anthrasilicosis
  - Asbestosis
3. Poisonings
  - Carbon Monoxide
  - Natural Gas
  - Lead
  - Benzene (Benzol)
  - Carbon Tetrachloride
  - Carbon Disulfide
  - Chlorinated Naphthalene and Diphenyl
  - Fluorine
  - Hydrogen Sulphide
  - Nitrobenzene
  - Ethyl Dichloride
  - Chloride

Sulfur Dioxide  
Methyl Chloride  
Methyl Alcohol  
Ammonia  
Phenol  
Cyanide  
Zinc (Metal Fume Fever)  
Mercury  
Cadmium  
Arsenic  
Manganese  
Chromium  
Selenium  
Vanadium

**Revision of List.** The State Board of Health may from time to time revise the above list of reportable diseases, make additions thereto and promulgate rules and regulations for the reporting and control of same.

---

## SECTION II.

### RECORDS AND REPORTS.

**Definition of Report.** For the purpose of these rules and regulations, a disease may be said to have been reported when the name of the person, address, age, sex, and color, together with the name of the disease existing or suspected, and the date of onset have been reported to the proper health authority, if the disease reported is one listed in Division D the report shall include the name and address of the employer.

**How Diseases are Reported.** Disease Divisions A, B, and C: (1) By completing report card for such diseases and sending same to the proper health authority; (2) the health officer may at his discretion accept verbal or telephone reports provided the required data is immediately recorded on report card.

**Time of Reporting.** All reports shall be submitted to the proper health authorities within six hours after seeing case. The report shall state whether the diagnosis is provisional or final.

**To Whom Reports Shall be Made.** All diseases listed in Divisions A, B, C, and D, shall be reported to the deputy state commissioner of health having jurisdiction.

### Persons Required to Make Reports.

(a) **Physicians** in attendance on a case of reportable disease shall report the same in the manner specified in these regulations to the Health Officer having jurisdiction.

**When no Physician is in Attendance.** Superintendents, or persons in charge of hospitals, sanatoriums, dispensaries, schools (public, private, or parochial) or other institutions, nurses, midwives, teachers, dairy managers, heads of private households, proprietors and keepers of hospitals, boarding houses, restaurants, lodging houses and camps, masters of vessels, and heads

of industrial establishments, or any other person or persons either attending or having knowledge of a reportable disease, SHALL communicate such fact to the health officer.

**Laboratories.** The director, or person in charge of an authorized laboratory, SHALL report daily positive tests of communicable diseases to the Health Officer having jurisdiction and shall at the end of each month report direct to The State Board of Health the total number of specimens examined by such laboratory showing the presence of each reportable disease.

**Embalmers.** When called to embalm the body of a person, whose death certificate certifies that the primary or contributory causes of death was a reportable disease, shall communicate such fact to the health officer.

**Telegraphic Reports.** In addition to reporting in the manner above specified, a telegraphic report shall be sent by the physician in attendance to The State Board of Health (collect) on the following diseases: Anthrax, Glanders, Plague, Rocky Mountain Spotted Fever, Typhus Fever, and Yellow Fever.

**Handling of Reports by Deputy State Commissioner of Health.** Upon receipt of report the same shall be entered upon a morbidity report card supplied by The State Board of Health. The individual report cards on all diseases received during the current week up to and including Saturday, together with the completed tabulation card, shall be mailed to The State Board of Health, reaching there not later than Tuesday of the succeeding week.

### SECTION III.

#### DEFINITIONS.

**Authorized Agent.** A person legally designated by The State Board of Health, the city or the county to act for the deputy state commissioner of health of that health jurisdiction.

**Carrier.** A person who without clinical symptoms of a reportable disease harbors and disseminates the infectious agent.

**Cleaning.** This term signifies the removal, by scrubbing and washing, as with hot water, soap, and washing soda, of organic matter on which and in which bacteria may find favorable conditions for prolonging life and virulence; also the removal by the same means of bacteria adherent to surfaces.

**Contact.** A contact is a person or animal known to have been sufficiently near to an infected person or animal to have been exposed to transference of infectious material directly or by articles freshly soiled with such material.

**Culture.** A growth of micro-organisms in or upon artificial media, such culture being obtained from body surfaces, secretions or excretions for the purpose of detecting the presence of disease-producing organisms.

**Dairy Farm.** A dairy or dairy farm is any place or premises where one or more cows are kept, a part or all of the milk or milk products from which is sold or delivered to any person, firm, or corporation.

**Delousing.** A process by which a person and his personal apparel are treated so that neither the adults nor the eggs of *pediculus corporis*, *pediculus capitis*, or *pediculus pubis* survive.

**Disinfection.** The destruction of the vitality of pathogenic micro-organisms by chemical or physical means. See section XII for approved solution.

When the word *concurrent* is used as qualifying disinfection, it indicates the application of disinfection immediately after the discharge of infectious material from the body of an infected person or after the soiling of articles with such infectious discharges.

When the word *terminal* is used as qualifying disinfection, it indicates the process of rendering the personal clothing and immediate physical environment of the patient free from the possibility of the transfer of the infection to others at the time when the patient is no longer a source of infection.

**Epidemic.** The occurrence of a disease in a community in excess of the usual prevalence.

**Fumigation.** A process by which the destruction of insects, as mosquitoes and body lice, and animals, as rats, is accomplished by the employment of gaseous agents.

**Health Officer.** Unless otherwise specified, is understood to mean the deputy state commissioner of health for that health jurisdiction.

**Immunity.** Relative protection against a specific disease. Persons may be regarded to be immune to a disease under the following conditions:

#### Diphtheria:

(a) When the records of the health officer show that the person in question has received diphtheria antitoxin of at least 1,000 units within the previous three weeks.

(b) When the records of the health officer show that the person in question has been inoculated with diphtheria toxin-antitoxin of four 1 cc. doses given one week apart, three doses of toxoid given one month apart or two dose of alum precipitated toxoid, such inoculations having been completed at least three months previously and within the preceding three years.

(c) When by a Schick test the person in question is found to be protected against diphtheria.

#### Smallpox:

(a) When the records of the health officer show that the person in question has had the disease at some previous time and has fully recovered.

(b) When the records of the health officer show that the person in question has been successfully vaccinated within the preceding two years.

(c) When the person in question shows an immune reaction at the site of inoculation with smallpox vaccine.

#### Paratyphoid and Typhoid Fever:

(a) When the records of the health officer show that the person in question has had the disease at some previous time and has fully recovered and the stool cultures are negative for typhoid and paratyphoid organisms.

(b) When the records of the health officer show that the person in question has been inoculated with typhoid and paratyphoid vaccine given in three divided doses one week apart within the preceding two years.

**Chicken Pox, German Measles, Measles, Mumps, Whooping Cough:**

When the records of the health officer show the person in question has had the disease at some previous time and has fully recovered.

**Incubation Period.** The interval which elapses between the entrance into the body of a disease-producing organism, and the manifestation of the first symptoms of the disease.

**Infectious Agent.** A live micro-organism capable under favorable conditions of inciting disease.

**Isolation.** The separating of persons suffering from communicable diseases, and of carriers of communicable diseases, from other persons in such places and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to other persons.

**Pasteurization.** The terms "pasteurization", "pasteurized", and similar terms shall be taken to refer to the process of heating every particle of milk or milk products to a temperature of not less than 142°F. and holding at such temperature for not less than 30 minutes in approved pasteurization apparatus properly operated. Provided that nothing contained in this definition shall be construed as disbarring any other process which has been demonstrated as of at least equal efficiency and is approved by the State Board of Health.

**Physician.** Any person now or hereafter authorized by law to practice medicine.

**Premises.** The area in which the diseased persons, suspects, contacts, or carriers are confined in order to prevent the transference of infection to others.

**Placard.** A sign conforming to the specifications adopted by The State Board of Health of Missouri, notifying the public of the presence of a communicable disease, and the same being displayed in a conspicuous place at the front and rear entrance to the house, apartment or other place where the patient is confined.

**Quarantine.** The limitation of freedom of movement of persons or animals who are known or reasonably suspected to have been exposed to a communicable disease.

**Renovation.** Such treatment, in addition to cleaning of walls, floors, and ceilings of rooms or houses as may be necessary to place the premises in satisfactory sanitary condition.

**Suspect.** Any person or animal in which the diagnosis of a communicable disease is in question.

**Susceptibles.** Any person or animal who is not known to have become immune to the particular communicable disease in question by natural or artificial process.

---

## SECTION IV.

### PRECAUTIONARY MEASURES.

**Duties of Physician.** It shall be the duty of the attending physician immediately upon discovering a case of communicable disease to order such isolation of case and disinfection of discharges as are necessary to prevent its spread, and it shall be the duty of the person so ordered to comply with such instructions unless and until he is otherwise notified by the health officer.

**Duties of Health Officer.** Whenever he is informed or has reason to believe that a reportable disease exists within the territory over which he has jurisdiction, he shall, either in person or through his authorized representative, immediately examine the facts in the case and institute such measures as are contained in these regulations for preventing the spread of such disease.

**Duties of Common Carriers.** All persons concerned with the management and operation of common carriers shall observe the rules for such carriers as contained in The State Board of Health publication "Sanitary Code for Common Carriers."

**Duties of Superintendents of Institutions.** Boarding Schools, Boys' and Girls' Camps, hospitals, almshouses, jails, or other similar institutions (public or private) shall provide a room for isolation. All persons knowing or suspected of being afflicted with any communicable disease shall be immediately segregated and the health officer notified.

#### Duties of School Authorities.

(a) **Diseases Excludable**—No teacher, pupil, or employee shall be permitted to attend any public, private, parochial, or Sunday School, when infected or suspected of being infected with any of the diseases listed in Divisions A and B, or being a carrier of such disease, or while suffering from *impetigo contagiosa*, *pediculosis*, *ringworm* or *scabies*.

(b) **Certificate for Return**—Unless otherwise excluded, it shall be the duty of the teacher, principal, or board of directors to exclude such teacher, pupil, or employee, and prohibit return thereto until a certificate is presented from a physician or the health officer stating that such teacher, pupil or employee is free from such disease and incapable of transmitting same. No certificate for readmission shall be issued: (1) While the person is suffering from disease in a communicable stage as defined for each disease under Section VII; (2) while in the carrier stage of such disease; (3) while under isolation or quarantine, and (4) while suspected of being in the incubation period as defined for each disease in Section VII.

(c) **Diseases in Home**—No teacher, pupil, or employee shall be permitted to attend school while residing in home or institution where there exists any of the following diseases in a communicable stage as defined for each disease in Section VII: Cholera, diphtheria, meningococcus meningitis, plague, poliomyelitis, scarlet fever, smallpox, typhus fever, yellow fever.

(d) **Certificate for Return**—Unless otherwise excluded, it shall be the duty of the teacher, principal, or board of directors of any school to exclude such person, and to prohibit return thereto until a certificate is presented from a physician or the health officer stating that the person is incapable of transmitting such infection. No certificate for readmission shall be issued (a) while the teacher, child, or employee resides in a home or institution where any of these diseases exist in the communicable stage as defined for each disease under Section VII; (b) until such teacher, child, or employee shall after last exposure have passed the incubation period for such diseases as defined in Section VII, or otherwise proves to be immune and incapable of transmitting the disease.

All certificates for readmission shall be kept on file by the teacher or principal during the school year.

**School Boards May Require Vaccination.** See Revised Statutes 1939, Section 10341. When smallpox exists in the neighborhood of school, board

may exclude pupils who refuse to be vaccinated. *In re Rebenack*, 62 A. 8; *State ex rel. v. Cole*, 220 Mo. 697, 119 S. W. 424.

**Attendants to Wear Gowns.** All persons in attendance on a communicable disease shall wear a gown over clothing or shall change clothing and disinfect person before leaving premises.

**Barbers, Chiropodists, and Cosmeticians** shall not serve a customer suffering from diseases of the nails, scalp or hair unless such customer is provided with utensils for his exclusive use; and they shall not serve a customer known or suspected of being afflicted with other diseases in a communicable stage.

**Blindness, Prevention of.** Persons in attendance at birth of a child shall, immediately after such birth, drop a 1 per cent solution of silver nitrate in each eye of such newborn infant and shall report same on birth certificate.

**Books.** No books of any public, private, or parochial school, or public library shall be loaned to premises on which there exists a communicable disease. If communicable disease should occur on premises to which such books may have been loaned, the books shall be withdrawn from circulation for a period of thirty days and exposed to direct sunlight for at least twenty-four hours in such a manner as to give maximum exposure to all surfaces; or preferably, and where practicable, exposed for six hours to formaldehyde fumes in a suitable air-tight chamber.

**Carriers, Management of.** Known carriers of communicable disease, unless otherwise specified, shall, for the purpose of these regulations, be considered and controlled as cases of the same disease. The health officer may take such steps as are necessary to locate carriers, and shall institute such measures as are necessary to either rid the person of the carrier stage of his infection, or prevent its transference to others.

**Contacts, Management of.** Persons who have been exposed to communicable disease shall be placed under the quarantine restrictions prescribed by these regulations and such additional restrictions as the health officer may deem necessary; and they shall so remain until such time as they shall have passed the incubation period of the disease to which they were exposed or until it has otherwise been determined that they are incapable of transmitting infection.

**Common Drinking Cup and Eating Utensils Prohibited.** The use of any common drinking or eating utensil in any public place or public institution or any hotel, soda fountain, concession, lodging house, theater, factory, store, public, private or parochial school, public hall, or any railway trolley car or station, or the furnishing of any such common drinking cup or utensil for common use in such place is prohibited. The words "common use" in this regulation shall be construed to mean the use by more than one person without adequate cleansing with scalding water or by washing followed by immersion in disinfectant solution.

**Doubtful Cases, Management of.** Doubtful cases of communicable disease shall be placed in isolation pending diagnosis.

#### **Dead Bodies.**

(a) **Classification:**

**Group 1.**

Anthrax

Cholera (Asiatic)

Glanders  
Foot and Mouth Disease  
Plague  
Psittacosis  
Smallpox  
Typhus Fever  
Yellow Fever

**Group 2.**

Meningococeus Meningitis  
Diphtheria  
Encephalitis, Infectious  
Erysipelas  
Influenza  
Poliomyelitis (acute anterior)  
Scarlet Fever  
Septic Sore Throat

**Group 3.**

Actinomycosis  
Dysentery (amebic)  
Dysentery (bacillary)  
Leprosy  
Paratyphoid Fever  
Rabies  
Tuberculosis (pulmonary)  
Tuberculosis (other than pulmonary)  
Typhoid Fever  
Undulant Fever

**Group 4.**

Acute Infectious Conjunctivitis  
Chicken Pox  
Dengue  
Measles  
German Measles  
Mumps  
Pneumonia  
Rocky Mountain Spotted Fever  
Tetanus  
Trachoma  
Trichinosis  
Tularemia  
Whooping Cough  
Chancreoid  
Gonorrhea  
Syphilis

(b) **Preparation and Transportation of Dead Bodies.** The transportation within the boundaries of the State of Missouri, of the remains of bodies dead from any of the diseases appearing in Group 1, is prohibited except by special permission of The State Board of Health, and unless such body is under the charge of either The State Board of Health of Missouri or The State Board of Embalmers.

Bodies dying from any of the diseases mentioned in Group 1 shall be buried in the registration district in which the death occurred, and within twenty-four hours after such death, unless special authority to the contrary has been obtained from The State Board of Health of Missouri.

The body of any person having died from any of the diseases listed in Groups 2 and 3, or afflicted with any of these diseases at the time of death from other causes, shall not be accepted for transportation by common carrier unless prepared for shipment in one of the two following ways: First, it shall have been thoroughly embalmed by arterial and cavity injection with a disinfecting fluid approved by The State Board of Health, the orifices disinfected and packed with cotton and the whole exterior of the body washed with a disinfecting fluid; or second, it shall have been completely wrapped in a sheet that is saturated with a solution of bichloride of mercury, in the proportion of one ounce of bichloride of mercury to one gallon of water, and encased in an air-tight metal or metal lined burial case, coffin, casket or box that is closed and hermetically sealed and all enclosed in a strong tight wooden box.

(c) **Who Shall Prepare Body.** The embalming or other procedure in preparing for shipment of the body of person who has died from any of the diseases mentioned in any of the foregoing groups shall be carried out by a licensed embalmer.

(d) **Preparation, Where Conducted.** The preparation of the body of a person dying from any of the aforementioned diseases shall be conducted in the room or house where the death occurred.

(e) **Clothing of Deceased.** The body of any person having died from any of the diseases mentioned in Groups 1, 2, 3, and 4, must not be accompanied by clothing and articles that have been exposed to the infectious material of such diseases.

(f) **Funerals.** The body of a person who has died from any of the diseases mentioned in Groups 1 and 2 shall in no instance be taken into any church, chapel, public hall or public building for the holding of funerals. The attendants at such funeral or burial shall be limited to the undertaker, clergy, and other persons necessary for the conduct of such funeral, and adult persons only who have resided in the premises where the person died.

(g) **Depth of Grave.** Except by special permission from The State Board of Health, no interment of any human body shall be made in any public or private burial ground unless the distance from the top of the box containing the coffin or casket be at least five feet from the natural surface of the ground, except where solid rock or water may be encountered; then the distance from the top of the box containing the coffin or casket shall be not less than four feet from the natural surface of the ground; and with the further exception that stillborn children and children less than four years of age, dead of any disease other than anthrax, cholera, diphtheria, leprosy, smallpox, scarlet fever, tetanus, typhoid fever, typhus fever, or yellow fever, shall be buried at such a depth that the top of the box containing the coffin or casket be not less than three and one-half feet from the natural surface of the ground.

**Dejecta and Excreta, Disposal of.** Dejecta and excreta from persons infected with communicable disease shall be protected in such a manner as to prevent the contamination of hands of attendants and articles of food and clothing, and so as to prevent access to it by flies and animals. It shall not be thrown into public or private sewer, privy, vault, or septic tank until it shall first have been sterilized by means of thermal or chemical methods.

**Food Handlers, Health of.** No person shall engage in the preparation, handling, or dispensing of food who is suffering from any communicable disease. The health officer may cause to be made such examinations as he deems necessary to determine the presence of such diseases.

**Hospitalization.** If, in the opinion of the health officer, suitable isolation cannot be provided at the place where the patient is confined, he may order removal to a more suitable place.

**Laundry.** All articles of clothing, bed linen, dressings, and the like coming in contact with patients suffering with communicable disease shall not be laundered by persons or institutions doing public laundry until the articles have first been rendered non-infectious by terminal or chemical methods.

### **MILK.**

**Sale or Distribution of.** No milk, butter, cream, cottage cheese or other milk products shall be offered for sale, sold, or given to any party or parties, or delivered to any creamery, butter factory, store, shop or market, from premises upon which exists a case or cases of anterior poliomyelitis, diphtheria, dysentery, scarlet fever, septic sore throat, erysipelas, typhoid or paratyphoid fever, or while in carrier stage of such disease, or from animals having abscess or running sores, actinomycosis, anthrax, foot and mouth disease, garget, tuberculosis, abortus or other contagious or infectious diseases except that milk produced on such premises whereon such diseases listed above exist may be sold under following conditions:

- (1) That the person suffering from any disease listed in this section shall not have any contact or connections with the production and handling of milk or milk products.
- (2) That all utensils and equipment used in connection with the production of milk or milk products shall be washed, sterilized, stored and otherwise handled in places entirely isolated from the patient.
- (3) That such premises be provided with a water supply and method of sewage disposal approved by the State Board of Health.
- (4) That milk produced on such premises whereon such disease listed in this section be sold to plants where said milk is pasteurized in a manner approved by the State Board of Health.

**Note:** Missouri should not be satisfied until all dairy herds are free from tuberculosis and abortus and every health officer should exert himself to bring this about.

**Predisposing Factors.** That health officer shall take cognizance of environmental factors, personal habits, or insanitary practices predisposing to the transmission of disease, and shall institute proper measures for the correction of the same.

**Public Assemblages.** Whenever communicable disease exists in any community, the health officer, in order to prevent the spread of such disease may order the closure of schools and other places of public assemblage for such time as may be necessary, and it shall be the duty of the school officers and other responsible persons to comply with such orders. In case the necessity for such order is questioned, The State Board of Health may be appealed to for confirmation or revocation of the order.

**Shaving Brushes, Sterilization of.** No shaving brush shall be placed on the market unless accompanied by a certificate of proper sterilization.

**Sick Room, Preparation of.** Before a patient afflicted with communicable disease is isolated in a room, all draperies, carpets, clothing or furniture not absolutely essential to the proper care of patient shall be removed, and if the same should have been contaminated they shall be disinfected in the manner specified in the section "Disinfection."

**Spitting Prohibited.** Spitting or expectorating upon the floor of any public building, used for public assemblage, or upon the floor or platform or any part of any railway or trolley car, ferry boat, or any public car or conveyance, or upon any sidewalk, is forbidden.

**Towel, Common, Use Prohibited.** No firm, person, or corporation owning, in charge of, or in control of any lavatory or wash room in any hotel, lodging house, restaurant, factory, barber shop, store, office building, public, private or parochial school, railway or trolley station or public conveyance by land or water, shall provide in or about such lavatory or wash room any towel for common use. The term "common" shall be construed to mean use by more than one person without laundering.

### Travel.

(a) **Within Health Jurisdiction.** Persons afflicted with communicable diseases shall remain on the premises to which they have been confined until the restrictions have been terminated by the health officer or his permission given for their removal to another place.

(b) **Within State.** No person afflicted with communicable disease shall travel from one health jurisdiction within the State of Missouri into another health jurisdiction within the State of Missouri except by permission of the health officers of the several jurisdictions involved in such travel.

(c) **Interstate.** No person afflicted with communicable disease shall travel from the State of Missouri into any other state except by permission of The State Board of Health of Missouri and the proper state and local authorities of the state or states involved in such travel. No person afflicted with communicable disease shall enter the State of Missouri without the consent of The State Board of Health of Missouri.

(d) **By Common Carrier.** Travel of persons afflicted with communicable disease involving use of common carriers must be under supervision of the health officer and in accordance with regulations governing common carriers. See Book V, "Sanitary Code," Part III, "Public Conveyances."

---

## SECTION V.

### DIAGNOSIS, PLACARD, ISOLATION AND QUARANTINE PROCEDURE.

#### Diagnosis.

**How Established.** The health officer may accept or may, at his discretion, verify diagnosis made by a physician. The diagnosis of diseases reported from other sources must be verified by the health officer before instituting control measures.

**How Changed.** (a) A reported case, unless otherwise specified, shall be accepted as a final diagnosis, and the diagnosis can be changed only by the health officer or his authorized agent; (b) a suspected case may be reported

with provisional diagnosis, and may be changed by the physician in attendance after notifying the health officer. Provisional diagnosis shall be changed to final diagnosis within forty-eight hours after being reported as provisional.

**Laboratory Examinations.** All laboratory examinations concerned with the control and release of a case, contact, or carrier of a communicable disease, shall be performed by the State Board of Health laboratory, or a laboratory authorized by The State Board of Health to make such examinations.

**Placard.**

Placards shall be of two types—"WARNING;" "QUARANTINE." They shall be made of bristol board, white in color, lettered in black, and shall conform to the illustrations appearing below.

15 inches

3-inch letters...

QUARANTINE

By order of

1-inch letters...

Deputy State Commissioner of Health

8 inches

The above card shall be used for the diseases where specified in Section VII and after diagnosis has been established.

15 inches

3-inch letters...

WARNING

2-inch letters...

COMMUNICABLE DISEASE

By order of

1-inch letters...

Deputy State Commissioner of Health

10 inches

The above card shall be used (a) for the diseases where specified in Section VII, and (b) for all other diseases enumerated in this Section before diagnosis is established.

**Isolation.**

**Isolation** as defined on page 13, refers to the limitation of movement of persons afflicted with communicable disease or "carriers" of communicable disease.

**When Imposed.** Isolation shall be imposed (a) in all cases of communicable disease where the diagnosis is in doubt, and (b) where specified for the diseases in Section VII.

**Duration.** Isolation shall remain in effect for the period prescribed by these regulations, and for such time thereafter as the infected person may, in the opinion of the health officer, be capable of transmitting infection. *Provided*, however, isolation imposed in cases of doubtful diagnosis may be terminated immediately when the case proves to be of a non-communicable nature.

**Persons Authorized to Impose Isolation.** (a) The health officer; (b) his authorized agent; (c) persons acting under direction of the health officer; *provided*, however, the physician shall, upon being called to a case of communicable disease, give instructions for the prevention of spread, and recommend other necessary measures pending the health officer assuming charge.

**Persons Authorized to Terminate Isolation.** (a) The health officer; (b) his authorized agent; (c) persons acting under direction of the health officer.

**Procedure for Imposing Isolation** shall consist of (a) proper preparation of sick room; (b) placing the placard (when required) in a conspicuous place upon the front and rear entrance of the house, apartment, or institution where the case is confined; (c) instructing the patient and family concerning the nature of the infection, the mode of transmission, the method of protection, the method of prevention, the necessity for the restrictive measures imposed, and their general conduct while in isolation.

**Procedure for Terminating Isolation** shall consist of (a) examination of the patient, and members of the household or institution where patient is confined, to determine freedom from infection, or capability of transmitting the infection for which isolation was imposed; (b) the institution of the proper methods for disinfection of premises; (c) when placard is required, removal of same.

### Quarantine.

Quarantine as defined on page 13 refers to the limitation of movement of well persons exposed to infection.

**When Imposed.** Quarantine shall be imposed for the diseases where specified in Section VII, and Section VIII.

**Duration.** Quarantine shall remain in force for the period prescribed by these regulations, and for such time thereafter as the persons quarantined may, in the opinion of the health officer, be capable of transmitting infection.

**Persons Authorized to Impose Quarantine.** (a) The health officer; (b) his authorized agent; (c) persons acting under direction of the health officer.

**Persons Authorized to Terminate Quarantine.** (a) The health officer; (b) his authorized agent; (c) persons acting under direction of the health officer.

**Procedure for Imposing Quarantine** shall consist of (a) proper preparation of sick room; (b) placing the placard (when required) in a conspicuous place upon the front and rear entrance of the house, apartment, or institution where the case is confined; (c) instructing the patient and family concerning the nature of the infection, the mode of transmission, the method of protection, the method of prevention, the necessity for the restrictive measures imposed, and their general conduct while in quarantine.

**Procedure for Terminating Quarantine** shall consist of (a) examination of the patient, and members of the household or institution where patient is confined, to determine freedom from infection, or capability of transmitting

the infection for which quarantine was imposed; (b) the institution of the proper methods for disinfection of premises; (c) when placard is required, removal of same.

**Invasion of Quarantine Area.** No persons except the health officer and his authorized representatives, physicians, authorized attendants, police and the clergy shall enter the quarantine area, and no one shall permit any other person to enter any room, apartment, or premises quarantined for a communicable disease, nor shall any person needlessly expose a child or any other person to a communicable disease. No person shall remove articles from the quarantine area without the permission of the health officer.

**Quarantine of Indigent Persons.** Indigent persons when placed in quarantine shall be reported by the health officer to the county court. It shall be the duty of the county court to furnish care, food, and other actual necessities for indigent persons so confined. (See Revised Statutes 1939, Sections 9590-9594.)

**Provisioning Persons in Quarantine.** The health officer shall within the limitations of these regulations prescribe the method for making delivery of groceries and other necessities to persons in quarantine.

**Wage Earners Given Special Privileges.** Wage earners constituting the principal support of a family having a communicable disease may be granted liberty to pursue their occupation if, in the opinion of the health officer, they are not capable of spreading contagion, *provided*, they live apart from the family in quarantine, or the patient is properly isolated.

**Obstructing Health Officer.** No person shall interfere with or obstruct the entrance to any premises or the inspection or examination of any occupant thereof by any health officer, his authorized representative, or a representative of the State Board of Health in the proper discharge of his duties.

---

## SECTION VI.

### STATE BOARD OF HEALTH MAY ADOPT SPECIAL MEASURES.

**Designate Quarantine Area.** Whenever, in the opinion of the State Board of Health, ingress to or egress from certain areas of the state endangers the health of contiguous areas of the state or the state as a whole, said area may be designated as a quarantine area, and shall be subject to such restrictions as the board may impose.

**Emergency Regulations.** In case of any threatened local or general epidemic or improperly controlled situation imperiling the public health, the executive officer may designate one or more members or representatives of the State Board of Health to immediately investigate and take such action as is considered necessary, and within the authority of the State Board of Health. Such representative or representatives shall use their discretion in such emergencies, and may promulgate such regulations as may be necessary for that particular locality and for the duration of the emergency. Such regulations shall have the full force and effect of regulations officially adopted by the board. When deemed advisable the representative may call upon a majority of the members of the board to assist in the investigation or to pass upon the regulations and procedures adopted.

**Power to Investigate.** Whenever it is reported that a deputy state commissioner of health has failed to perform his duties, an investigation will be

made by the State Board of Health and action taken as prescribed by law. Revised Statutes 1939, Section 9747.

**Special Representative.** In order to further safeguard the health of the people and to prevent the introduction, occurrence, or spread of diseases dangerous to public health, the State Board of Health may appoint any qualified physician or sanitarian as its special representative, and may delegate to such person such duties as the board may deem advisable.

## SECTION VII.

### SPECIFIC MEASURES FOR THE CONTROL OF DISEASES ENUMERATED IN SECTION I, DIVISION A.

In addition to the general measures in the foregoing articles the following rules and procedures shall apply to diseases of man appearing in this section:

#### ACTINOMYCOSIS.

##### Regulations.

**Placard.** None.

**Isolation.** None, *provided* patient is under adequate medical care.

**Quarantine.** None.

**Concurrent Disinfection** of all discharges from lesions and articles soiled therewith.

**Terminal Disinfection.** By thorough cleaning.

**Report** all cases in animals to deputy state veterinarian.

**Sale of Meat** from infected animals is prohibited unless slaughtering is done under public supervision.

**Sale of Milk** from infected animals prohibited.

**Note.** See Section XI, page 64, "Diseases in Animals."

##### Information.

**Infectious Agent.** *Actinomyces hominis* and other species of this genus.

**Source of Infection.** Nasal and bowel discharges, and the infected material from lesions in human and animal cases of the disease; uncooked meat from infected animals may serve as a source of infection.

**Mode of Transmission.** By contact with discharges or with articles freshly soiled with the discharges from animal and human cases.

**Incubation Period.** Unknown.

**Period of Communicability.** So long as open lesions remain, as proved by the presence of the infectious agent on microscopic or cultural test.

##### Recommendations.

**Recognition of Disease** by clinical symptoms confirmed by microscopic examination of discharges from lesions.

**Inspection of Meat**, with condemnation of carcasses, or infected parts of carcasses of infected animals.

**Destruction of known animal sources of infection.**

Observance of hygiene of oral cavity because of high incidence of infection of the mouth.

**ACUTE INFECTIOUS CONJUNCTIVITIS.**

This title to replace the terms gonorrhreal ophthalmia, ophthalmia neonatorum, and babies' sore eyes.

**Regulations.**

**Placard.** None.

**Isolation.** None, *provided* patient is under adequate medical supervision.

**Quarantine.** None.

**Concurrent Disinfection.** Disinfection of conjunctival discharges and articles freshly soiled therewith.

**Terminal Disinfection.** Thorough cleaning.

**Prophylaxis.** Silver nitrate solution (1%) in eyes of newborn.

**Enforcement** of rule prohibiting common towel, page 19.

**Enforcement** of rules and recommendations for the control of gonorrhea, page 60.

**Information.**

**Infectious Agent.** The gonococcus or some member of a group of pyogenic organisms including the hemoglobinophilic bacilli.

**Source of Infection.** Discharges from conjunctivae or adnexa, or genital mucous membranes of infected persons.

**Mode of Transmission.** Contact with infected persons or articles freshly soiled with discharges of such persons.

**Incubation Period.** Irregular, but usually thirty-six to forty-eight hours.

**Period of Communicability.** During course of disease and until discharges from infected mucous membranes have ceased.

**Recommendations.**

**Recognition of Disease.** Clinical symptoms confirmed where possible by bacteriological examination.

**Education** and personal cleanliness.

**ANCHYLOSTOMIASIS.**

(*Hookworm.*)

**Regulations.**

**Placard.** None.

**Isolation.** None.

**Quarantine.** None.

**Concurrent Disinfection.** Sanitary disposal of bowel discharges to prevent contamination of soil and water.

**Terminal Disinfection.** None.

**Information.**

**Infectious Agent.** Anchylostoma (*A. Duodenale* and *Necator Americanus*).

**Source of Infection.** Feces of infected person; infection generally takes place through the skin and occasionally by the mouth.

**Mode of Transmission.** Larval forms pierce the skin, usually of the feet; also by drinking water containing larvae; by eating soiled food; by hand to mouth transmission of eggs, or larvae from objects soiled with infected discharges. The chief reservoir of infectious material is contaminated soil.

**Incubation Period.** Seven to ten weeks.

**Period of Communicability.** So long as the parasite or its ova are found in bowel discharges of the infected individual. Contaminated soil remains infective for five months in the absence of freezing.

#### Recommendations.

**Recognition of the Disease.** Microscopic examination of bowel discharges.

**Education as to dangers of soil pollution.**

**Prevention of Soil Pollution.** By installation of sanitary disposal system for human discharges.

**Personal Prophylaxis.** By cleanliness and wearing of shoes.

**Treatment.** Appropriate treatment of infected individuals to rid the intestinal canal of the parasite and its ova.

## ANTHRAX.

#### Regulations.

**Placard.** None.

**Isolation** of infected individual until lesions have healed.

**Quarantine.** None.

**Concurrent Disinfection** of discharges from lesions and articles soiled therewith.

**Terminal Disinfection.** Thorough cleaning.

**Report** of cases in animals to deputy state veterinarian.

**Sale of Milk, Meat, Hides and Hair** from infected animals prohibited. See Section XI, page 64, "Diseases in Animals."

**Enforcement** of regulation, page 18, "Sterilization of Shaving Brushes."

**Telegraphic Report.** State Board of Health required. See page 11.

#### Information.

**Infectious Agent.** Anthrax Bacillus (*Bacillus anthracis*).

**Source of Infection.** Discharges from open lesions of human and animal cases and hair, hides, flesh and feces of infected animals.

**Mode of Transmission.** Inoculation as by accidental wound or scratch; inhalation of spores of the infectious agent, and ingestion of insufficiently cooked infected meat.

**Incubation Period.** Within seven days.

**Period of Communicability.** During the febrile stage of the disease and until lesions have ceased discharging. Infected hair and hides of infected animals may communicate the disease for many months after slaughter of the animal, and after curing the hide, fur, or hair unless disinfected.

**Recommendations.**

**Location of Source of Infection.** Animals ill with Anthrax should be destroyed.

**Every Person Handling Raw Hide, Hair, or Bristles** who has an abrasion of the skin should immediately report to a physician.

**Special Instructions** should be given to all employees handling raw hides in regard to the necessity for personal cleanliness.

**Disinfection of Hair, Wool, or Bristles** of animals originating in known infected centers before they are used or assorted.

### CHICKEN POX.

**Regulations.**

**Placard.** None.

**Isolation** of patient until all primary skin lesions are healed completely and scabs or scales are shed.

**Quarantine.** Non-immune children in the infected household may attend school for 14 days following first exposure, then be confined to premises for the next 7 days. Immune children may be released by the health officer. School children and school employees—See page 14, "Duty of School Authorities;" adults, no restrictions.

**Chicken Pox in Adults** subject to the same procedures as prescribed for smallpox.

**Concurrent Disinfection** of articles soiled by discharges from lesions.

**Terminal Disinfection.** Thorough cleaning.

**Information.**

**Infectious Agent.** Probably a filterable virus.

**Source of Infection.** The infectious agent is presumably present in the lesions of the skin and of the mucous membranes. The latter appearing early, and rupturing as soon as they appear, render the disease communicable early, that is, before the exanthem is in evidence.

**Mode of Transmission.** Directly from person to person; indirectly through articles freshly soiled by discharges from infected individual.

**Incubation Period.** Two to three weeks.

**Period of Communicability.** Until the primary scabs have disappeared from the mucous membranes and the skin. Minimum period, ten days.

**Recommendations.**

**Recognition of the Disease.** Clinical symptoms. The differential diagnosis of this disease from smallpox is important, especially in persons over fifteen years of age.

**Chicken Pox** in persons over fifteen years of age, or at any age during an epidemic of smallpox should be investigated to eliminate the possibility of it being smallpox.

### CHOLERA.

**Regulations.**

**Placard.** Yes; (quarantine sign); during period of communicability. Minimum, twenty-one days.

**Isolation** of patient in hospital or screened room during period of communicability.

**Quarantine** of contacts for five days from last exposure or longer if stools are found to contain the cholera vibrio.

**Concurrent Disinfection.** Prompt and thorough disinfection of stools and vomited matter. Articles used by and in connection with the patient must be disinfected before removal from the room. Food left by the patient should be burned.

**Terminal Disinfection.** Bodies of those dying from cholera should be cremated if practicable, or otherwise wrapped in a sheet wet with disinfectant solution and placed in water-tight casket. (See "Dead Bodies," page 16.)

The room in which the sick patient was isolated should be thoroughly cleaned and disinfected.

Telegraphic Report to State Board of Health required. See page 11.

#### Information.

**Infectious Agent.** Cholera vibrio (*vibrio comma*).

**Source of Infection.** Bowel discharges and vomitus of infected persons and feces of convalescent or healthy carriers. Ten per cent of contacts may be found to be carriers.

**Mode of Transmission.** By food and water polluted by infectious agent; by contact with infected persons, carriers, or articles soiled by their discharges; by flies.

**Incubation Period.** One to five days, usually three days; occasionally longer if the healthy carrier stage, before development of symptoms, is included.

**Period of Communicability.** Usually seven to fourteen days or longer, and until the infectious organism is absent from the bowel discharges.

**Minimum Period** of quarantine, twenty-one days.

#### Recommendations.

**Recognition of the Disease.** Clinical symptoms confirmed by bacteriological examination.

**Rigid Personal Prophylaxis** of attendants by scrupulous cleanliness, disinfection of hands each time after handling patient or touching articles contaminated by dejecta, the avoidance of eating or drinking anything in the room of the patient, and the prohibition of those attendant on the sick from entering the kitchen.

**Bacteriological Examination** of the stools of contacts to determine carriers; isolation of carriers.

**Water** should be boiled if used for drinking or toilet purposes or if used in washing dishes or food containers, unless the water supply is adequately protected against contamination or is so treated, as by chlorination, that the cholera vibrio cannot survive in it.

**Careful Supervision of Food and Drink.** Where cholera is present, only cooked food should be used. Food and drink after cooking or boiling should be protected against contamination, as by flies and by human handling.

**Epidemic Measures.** Inspection service for early detection and isolation of cases; examination of persons exposed in infected centers for detection of carriers, with isolation or control of carriers; disinfection of rooms occupied

by the sick, and the detention, in suitable camps for five days, of those desirous of leaving for another locality. Those so detained should be examined for detection of carriers. Immediate immunization of contacts and widespread active immunization in the affected community may be undertaken.

### DENGUE.

#### Regulations.

**Placard.** Yes; (warning sign); during period of communicability and until after mosquitoes have been destroyed. A minimum period of seven days.

**Isolation.** Patient must be kept in screened room during period of communicability. A minimum period of seven days.

**Quarantine.** None.

**Concurrent Disinfection.** None.

**Terminal Disinfection.** On termination of disease, use of specific insecticides in room and house to destroy mosquitoes.

#### Information.

**Infectious Agent.** A filterable virus.

**Source of Infection.** Blood of infected persons.

**Mode of Transmission.** By bite of infected mosquito, aedes aegypti.

**Incubation Period.** Three to fifteen days.

**Period of Communicability.** From day before onset to fifth day of disease.

#### Recommendations.

**Recognition of the Disease.** Clinical symptoms.

**Measures Directed Towards the Elimination of Mosquitoes.**

Screening of rooms.

### DIPHTHERIA.

#### Regulations.

**Placard.** Yes; (quarantine sign); as long as nose and throat cultures are positive.

**Isolation.** Until two cultures from the throat and two from the nose, taken not less than twenty-four hours apart, fail to show the presence of diphtheria bacilli. Isolation may be terminated if persistent diphtheria bacilli prove avirulent.

**Quarantine** of exposed persons for seven days from last exposure. *Provided*, exposed persons may be released sooner to take up residence elsewhere if by culture they are shown to be free from diphtheria bacilli.

**Concurrent Disinfection** of all articles which have been in contact with the patient, and all articles soiled by discharges from the patient.

**Terminal Disinfection** at the end of the illness by thorough airing and sunning of the sick room with cleaning and renovation.

**Sale of Milk** from premises is prohibited except under certain conditions. See page 18.

#### Information.

**Infectious Agent.** Diphtheria bacillus. (*Corynebacterium diphtheriae*.)

**Source of Infection.** Discharges from diphtheria lesions of nose, mouth, conjunctivae, vagina, and wound surfaces. Secretions from the nose and mouth of carriers of the bacillus.

**Mode of Transmission.** Directly by personal contact; indirectly by articles freshly soiled with discharges, or through infected milk or milk products.

**Incubation Period.** Usually two to five days, occasionally longer, if a healthy carrier stage precedes the development of clinical symptoms.

**Period of Communicability.** Until virulent bacilli have disappeared from the secretions and the lesions. The persistence of the bacilli after the lesions have healed is variable. In fully three-fourths of the cases they disappear within two weeks. In 95 per cent of cases the bacilli disappear in four weeks. In some cases virulent bacilli remain in the nose and throat discharges for from two to six months. Such persons frequently have other nose and throat abnormalities.

### Recommendations.

**Recognition of Disease.** By clinical symptoms with confirmation by bacteriological examination of discharges.

**Immunization.** Passive immunization with antitoxin is rarely necessary for exposed persons over 5 years of age, for whose protection daily examination by a physician or nurse is provided. Infants and young children exposed to Diphtheria in the family, who can not be examined daily by a physician, should receive a prophylactic dose of antitoxin without prior Schick testing, unless they are known to have been immunized.

All children should be immunized against Diphtheria. At 6 months of age 2 doses of alum precipitated toxoid at not less than 1 month interval, nor longer than 3 month interval should be given; if Diphtheria toxoid is given, 3 injections should be given at one month interval. This same procedure should be applied to all children at or below 12 years of age if immunization has been neglected in infancy. Children given an immunizing treatment during infancy should receive a single injection as a reinforcing dose on entrance to school.

Older children, and adults especially exposed, including teachers, nurses, and physicians, found to be Schick-positive should be actively immunized. In order to minimize local and constitutional reactions in members of these groups, it is desirable to carry out a preliminary "toxoid reaction test", non-reactors to receive toxoid and reactors multiple small doses of suitably diluted toxoid. But not within 3 weeks of administration of antitoxin.

**Determination of Presence or Absence** of carriers among contacts, and, as far as practicable, in the community at large.

## DYSENTERY (Amebic).

### Regulations.

**Placard.** None.

**Isolation.** None.

**Quarantine.** None.

**Concurrent Disinfection** of bowel discharges. Hand washing after use of toilet.

**Terminal Disinfection.** Cleaning.

**Infected Persons and Carriers** Prohibited from handling milk or other foods.

**Information.**

**Infectious Agent.** Endamoeba histolytica.

**Source of Infection.** Bowel discharges of infected persons.

**Mode of Transmission.** By drinking contaminated water, and by eating infected material; from objects soiled with discharges of an infected individual, or of a carrier; by flies.

**Incubation Period.** Two days to several months.

**Period of Communicability.** During course of disease and until repeated microscopic examination of stools show absence of endamoeba histolytica.

**Recommendations.**

**Recognition of Disease.** By clinical symptoms confirmed by microscopic examination of stools.

**Boil Drinking Water** unless the supply is known to be free from contamination.

**Water Supply** should be protected against contamination, and supervision should be exercised over all foods eaten raw.

**Sanitary Disposal of Excreta** by sewerage system or sanitary privies.

**Location and Supervision of carriers.**

**DYSENTERY (Bacillary).****Regulations.**

**Placard.** None.

**Isolation of infected individual** during communicable period of the disease.

**Quarantine.** None.

**Concurrent Disinfection.** Bowel discharges.

**Terminal Disinfection.** Cleaning.

**Sale of Milk** from premises prohibited except under certain conditions. See page 18.

**Information.**

**Infectious Agent.** Dysentery bacillus (*Erberthella dysenteriae*, *Erberthella paradyssenteriae*).

**Source of Infection.** Bowel discharges of infected persons.

**Mode of Transmission.** By drinking contaminated water, by eating infected foods, and by hand-to-mouth transfer of infected material; by objects soiled with discharges of an infected individual or of a carrier; by flies.

**Incubation Period.** Two to seven days.

**Period of Communicability.** During the febrile period of the disease, and until the organism is absent from the bowel discharges.

**Recommendations.**

**Recognition of the Disease.** Clinical symptoms confirmed by serological and bacteriological tests.

**Rigid Personal Prophylaxis** of attendants upon infected persons.

**Search for Carriers** and proper control of same.

**Proper Supervision** of water supply.

**Proper Disposal** of excreta by means of sewerage system or sanitary privies.

**Protection of patient and discharges against flies.**

**ENCEPHALITIS, INFECTIOUS.****Regulations.**

**Placard.** None.

**Isolation.** During febrile stage, and protection against mosquitoes.

**Quarantine.** None.

**Concurrent Disinfection** of discharges of nose and mouth and articles soiled therewith.

**Terminal Disinfection.** Thorough cleaning.

**Information.**

**Infectious Agent.** Probably a filterable virus, specific for each of the four types: Vienna, St. Louis, Eastern Equine, Western Equine.

**Source of Infection.** Unknown.

**Mode of Transmission.** Unknown.

**Incubation Period.** Undetermined; believed to be about ten days.

**Period of Communicability.** Probably during the febrile stage of the disease.

**Recommendations.**

**Recognition of the disease by clinical symptoms.**

**Search for an examination of cases during period of prevalence.**

**Isolation of suspected febrile cases pending diagnosis.**

**Mosquito control.**

**FAVUS AND RINGWORM OF THE SCALP.****Regulations.**

**Placard.** None.

**Isolation.** Exclusion of patient from school and other public places until lesions are healed. Patient should wear a light tight-fitting cotton skull cap constantly. This must be changed frequently and boiled.

**Quarantine.** None.

**Concurrent Disinfection.** Toilet articles of patient.

**Terminal Disinfection.** None.

**Information.**

**Infectious Agent.** Favus: *Trichophyton Scholeini*, *Trichophyton violaceum* of *Microsporum gypseum*. Ringworm of the Scalp: Species of *Trichophyton* and *Microsporum* other than those causing Favus.

**Source of Infection.** Lesions of skin, particularly on scalp.

**Mode of Transmission.** Direct contact with patient, and indirectly through toilet articles.

**Incubation Period.** Unknown.

**Period of Communicability.** Until skin and scalp lesions are healed.

**Recommendations.**

**Recognition of Disease.** Clinical symptoms confirmed by microscopic examination of crusts.

**Elimination of common utensils such as hair brushes and combs.**

**Provision for adequate and intensive treatment and cure of cases of Favus at hospitals and dispensaries, to abbreviate the period of infectivity of the patient.**

### GERMAN MEASLES (Rubella).

#### Regulations.

**Placard.** None.

**Isolation.** Separation of patient from non-immune children and exclusion of patient from school and other public places for the period of communicability.

**Quarantine.** None.

School children and school employees—See page 14, "Duty of School Authorities." Other adults—no restrictions.

**Concurrent Disinfection.** Discharges from nose and mouth of patient and articles soiled by discharges.

**Terminal Disinfection.** Airing and cleaning.

#### Information.

**Infectious Agent.** A filterable virus.

**Source of Infection.** Secretions from the mouth and possibly the nose.

**Mode of Transmission.** By direct contact with patient or with articles freshly soiled with the discharges of nose and mouth of the patient.

**Incubation Period.** From ten to twenty-one days; average sixteen days.

**Period of Communicability.** Eight days from onset of disease.

#### Recommendations.

**Recognition of Disease.** Clinical symptoms.

**NOTE:** The reason for attempting to control this disease is that it may be confused with scarlet fever during its early stages; each person having symptoms of the disease should, therefore, be placed under the care of a physician and the case should be reported to the local health department.

### GLANDERS.

#### Regulations.

**Placard.** None.

**Isolation.** Patient at home or in hospital; for infected horses destruction rather than isolation is advised. Skin contact with the lesions in the living or dead body is to be scrupulously avoided.

**Quarantine.** Of all horses in an infected stable until all have been tested by specific reaction, and the removal of infected horses and terminal disinfection of stable have been accomplished.

**Concurrent Disinfection** of discharges from lesions and articles soiled therewith.

**Terminal Disinfection.** Thorough cleaning.

Report cases in animals to deputy state veterinarian.

**NOTE:** See page 65, Section XI, "Diseases in Animals."

**Telegraphic Report** to State Board of Health required. See page 11.

**Information.**

**Infectious Agent.** Glanders bacillus. (Pfefferella mallei.)

**Source of Infection.** Discharges from open lesions of mucous membrane or of the skin of human and equine cases of the disease (i. e., pus and mucous from the nose, throat) and bowel discharges from infected man and horse.

**Mode of Transmission.** Contacts with case or with articles freshly soiled by discharges from human or equine case.

**Incubation Period.** Unknown.

**Period of Communicability.** Until bacilli disappear from discharges or until lesions have healed.

**Recommendations.**

**Recognition of Disease** by specific biological reactions, such as complement fixation test, the mallein test, the agglutination test, or by nonspecific reactions, such as the Straus reaction, if confirmed by culture, or by identification of the glanders bacillus, or by autopsy of doubtful cases.

**Abolition of common drinking trough for horses.**

**Sanitary Supervision** of stables and blacksmith shops.

**Semi-Annual Testing** of all horses by a specific reaction where the disease is common.

**Testing of all Horses** offered for sale where the disease is common.

**INFLUENZA (Epidemic).****Regulations.**

**Placard.** None.

**Isolation.** During the acute stage of the disease, especially in severe cases. Visiting the patient should be discouraged.

**Quarantine.** None.

**Concurrent Disinfection.** Discharges from nose and mouth of patient.

**Terminal Disinfection.** Airing and cleaning.

**Information.**

**Infectious Agent.** A filterable virus.

**Source of Infection.** Probably discharges from mouth and nose.

**Mode of Transmission.** Believed to be by direct contact, by droplet infection of articles freshly soiled with discharges from mouth and nose of infected persons.

**Incubation Period.** Usually twenty-four to seventy-two hours.

**Period of Communicability.** Undetermined; apparently during febrile period at least seven days from onset of clinical symptoms.

**Recommendations.**

**Recognition** of the disease by clinical symptoms only; uncertain in inter-epidemic periods.

**Terminal Disinfection.** Airing and cleaning.

**General Measures.** During epidemics, efforts should be made to reduce opportunities for direct contact infection as in crowded halls, stores, and street cars. Kissing, the use of common towels and glasses, eating utensils or toilet articles, should be avoided. The hands should be washed carefully

before eating. In isolated towns and institutions, infection has been delayed and sometimes avoided by strict exclusion of visitors from already infected communities. The closing of schools has not been effective in checking the spread of infection. Scrupulous cleanliness of dishes and utensils used in preparing and serving food in public eating places should be required, including the subjection of all such articles to disinfection in hot soap suds. In groups which can be brought under daily professional inspection, the isolation of early and suspicious cases of respiratory tract inflammation, particularly when accompanied with a rise in temperature, may be relied upon to delay the spread of the disease.

To minimize the severity of the disease, and to reduce mortality, a patient should go to bed at the beginning of an attack, and not return to work without the approval of his physician.

### **KERATO CONJUNCTIVITIS, Infectious.**

(Superficial Punctate Keratitis; Nummular Keratitis).

#### **Regulations.**

**Placard.** None; provided hygienic measures are taken by the patient.

**Isolation.** None; provided hygienic measures are taken by the infected person.

**Quarantine.** None; provided the patient is receiving adequate care and not exposing others to the infection.

**Concurrent Disinfection** of all discharges from the eye and nose and articles soiled therewith.

**Terminal Disinfection.** None.

#### **Information.**

**Infectious Agent.** Considered to be a filterable virus.

**Source of Infection.** Probably the discharge from the eye of an infected person or a carrier.

**Mode of Transmission.** Apparently contact with an infected person or carrier or with articles freshly soiled with discharges of such person.

**Incubation Period.** Not definitely established but probably about five days.

**Period of Communicability.** Unknown but certainly during acute stage of the disease.

#### **Recommendations.**

**Recognition of the Disease.** Acute onset usually with sensation as of foreign body under the upper lid. Edema of lids, scleral injection, follicular hypertrophy of palpebral conjunctiva, enlargement and tenderness of pre-auricular lymph node with a watery discharge, followed in few or many of the cases by multiple pin-point corneal opacities. Involvement usually unilateral.

**Prevalence.** Occurs in epidemic form in warm climates, also among industrial employees in temperate climates, involving a small percentage of the individuals in the groups affected.

**Susceptibility and Immunity.** Susceptibility variable. No age, sex or race known to be immune.

**Education.** Education as to personal cleanliness and as to danger of use of common towels and toilet articles.

Avoidance of contact of hands with conjunctival or nasal discharges.

**LEPROSY.****Regulations.**

**Placard.** Yes; (warning sign); during period of communicability.

**Isolation.** Separation of patient under supervision of health officer in room or hospital, or preferably in the National Leprosarium, until treatment has brought about a healing of all lesions of skin and mucous membranes, and the patient has been observed with the disease in this arrested form, for not less than six months.

**Quarantine.** None.

**Concurrent Disinfection.** Discharges and articles soiled with discharges.

**Terminal Disinfection.** Thorough cleaning of living premises of patient.

**Information.**

**Infectious Agent.** Leprosy bacillus (*Mycobacterium leprae*).

**Source of Infection.** Discharges from lesions.

**Mode of Transmission.** Close, intimate, and prolonged contact with infected individuals. Flies and other insects may be mechanical carriers.

**Incubation Period.** Prolonged; undetermined.

**Period of Communicability.** Infectivity exists throughout the duration of the disease. Where good standards of personal hygiene prevail, the disease is but slightly communicable.

**Recommendations.**

**Recognition of Disease.** Clinical symptoms confirmed by bacteriological examination.

Where at all practicable, lepers should be isolated in the National Leprosarium.

**MALARIA.****Regulations.**

**Placard.** None.

**Isolation.** None; except protection of patient from approach of mosquitoes by screening bedroom or house until blood is rendered free from malaria parasites through treatment with quinine.

**Quarantine.** None.

**Concurrent Disinfection.** None; destruction of Anopheles mosquitoes in sick room.

**Terminal Disinfection.** Destruction of Anopheles mosquitoes in sick room.

**Information.**

**Infectious Agent.** Several species of malarial organisms: *Plasmodium vivax* (tertian); *Plasmodium malariae* (quartan); *Laverania falciparum* (aestivoautumnal).

**Source of Infection.** Blood of an infected individual.

**Mode of Transmission.** Bite of the infected Anopheles mosquito. The mosquito is infected by biting an individual suffering from acute or chronic malaria. The parasite develops in the body of the mosquito for from ten to fourteen days after which time the sporozoites appear in its salivary glands.

**Incubation Period.** Varies with the type of species of infecting organism, and the amount of infection; usually fourteen days in the tertian variety.

**Period of Communicability.** As long as organisms exist in the blood.

#### Recommendations.

**Recognition of Disease** by clinical symptoms, and microscopic examination of blood.

**Employment** of known measures for destroying larvae of Anopheles, and eradication of breeding places of such mosquitoes.

**Blood Examination** of persons living in infected centers to determine the incidence of infection.

**Screening** sleeping and living quarters; use of mosquito nets.

**Killing** mosquitoes in living quarters.

**Adequate** treatment of persons with clinical attacks of malaria.

**Routine** oral administration of suppressive doses of atabrine or of quinine salts may be advisable for persons exposed to infection and unable to avoid anopheline mosquitoes.

## MEASLES.

#### Regulations.

**Placard.** None.

**Isolation.** A period of a ten-day minimum.

**Quarantine.** Non-immune children in infected household may continue in school for seven days from first exposure, then to be confined to premises for next seven days. Adults no restrictions. School children and school employes—See page 14, "Duty of School Authorities."

**Concurrent Disinfection.** Discharges from nose and mouth, and articles soiled therewith.

**Terminal Disinfection.** Thorough cleaning.

#### Information.

**Infectious Agent.** A specific filterable virus.

**Source of Infection.** Nose and mouth discharges of infected individuals.

**Mode of Transmission.** Directly from person to person; indirectly through articles freshly soiled with nose and mouth discharges of infected individuals. The most easily transmitted of all communicable diseases.

**Incubation Period.** Seven to eighteen days; usually about twelve days.

**Period of Communicability.** During the period of catarrhal symptoms, and until the cessation of abnormal mucous membrane secretions; minimum period of ten days; from four days before to six days after appearance of rash.

#### Recommendations.

**Recognition of Disease** by clinical symptoms.

**Daily Examination** of exposed children or other possibly exposed persons. This examination should include record of body temperature. The non-immune exposed person exhibiting a rise of temperature of 0.5 C. or more should be promptly isolated pending diagnosis.

**Schools** should not be closed or classes discontinued where daily observation of children by physician or nurse is provided for.

**Education as to special danger of exposing young children to those exhibiting acute catarrhal symptoms of any kind.**

**Immunization.** By the use of serum of convalescent patients or of healthy adults who have had measles, or by the use of an immune globulin preparation given to a person within five days after his first exposure to a known case of measles, the attack in the exposed person may be averted in majority of cases, or modified. If averted, such passive immunity will persist 2 to 4 weeks. Given later, at the 6th or 7th day after exposure, the attack is usually modified and lasting immunity is acquired.

Immunization of infants and children under 3 years of age with convalescent serum or immune globulin in families where older children have the disease is an accepted Public Health procedure. This procedure is encouraged in exposed children ill from other causes.

### **MENINGOCOCCUS MENINGITIS.**

#### **Regulations.**

**Placard.** Yes; (warning sign); a minimum of fourteen days.

**Isolation** of infected individuals until fourteen days after onset. Isolation of carriers until nasal and pharyngeal secretions are proved by bacteriological examination to be free from the infecting organism.

**Quarantine.** Children in infected household confined to premises for seven days from last exposure, upon taking up residence may be released by health officer after observation for seven days. School children and school employees—See page 14, "Duty of School Authorities." Other adults—no restrictions if patient is properly isolated.

**Concurrent Disinfection** of all discharges from nose and mouth, and of articles soiled therewith.

**Terminal Disinfection.** Cleaning.

#### **Information.**

**Infectious Agent.** Meningococcus (*Neisseria intracellularis*).

**Source of Infection.** Discharges from nose and mouth of infected persons. Clinically recovered cases and healthy persons who have never had the disease but have been in contact with cases of the disease or other carriers, act as carriers and are commonly found, especially during epidemics. Such healthy carriers are not uncommonly found independent of epidemic prevalence of the disease.

**Mode of Transmission.** By direct contact with infected persons and carriers, and indirectly by contact with articles freshly soiled with nasal and mouth discharges of such persons.

**Incubation Period.** Two to ten days; commonly seven. Occasionally for longer periods when a person is a carrier for a time before developing the disease.

**Period of Communicability.** During the clinical course of the disease, 14 days, and until the specific organism is no longer present in the nasal and mouth discharges of the patient. The same applies to healthy carriers, so far as effects persistence of infectious discharges.

#### **Recommendations.**

**Recognition of the Disease.** Clinical symptoms, confirmed by microscopic and bacteriological examination of the spinal fluid, and by bacteriological examination of nasal and pharyngeal secretions.

**Prompt therapeusis** of the patient and chemoprophylactic treatment of contacts with a sulfonamide drug such as sulfadiazine, under medical supervision, is useful in limiting communicability and preventing secondary cases.

**Education** as to personal cleanliness and necessity of avoiding contact and droplet infection.

**Prevention of Overcrowding**, such as is common in living quarters, transportation conveyances, working places, and places of public assembly in the civilian population, and in inadequately closed quarters in barracks, camps and ships among military units.

**Immunization.** None.

### **MUMPS.**

#### **Regulations.**

**Placard.** None.

**Isolation.** Separation of patient from non-immune children and exclusion of patient from school and public places for the period of twelve days.

**Quarantine.** Non-immune children in infected household may continue in school for 14 days from first known exposure, then confined to premises for next seven days. Immune children may be released by the health officer. School children and school employees—See page 14, "Duty of School Authorities." Adults, no restrictions.

**Concurrent Disinfection.** Discharges from nose and mouth of infected person and articles freshly soiled therewith.

**Terminal Disinfection.** None.

#### **Information.**

**Infectious Agent.** A specific filterable virus.

**Source of Infection.** Secretions from mouth and possibly of nose.

**Mode of Transmission.** By direct contact with an infected person or with articles freshly soiled with the discharges from nose or mouth of such infected person.

**Incubation Period.** The most common period, eighteen days, accepted as usual. A period of twenty-one days is not uncommon.

**Period of Communicability.** Unknown, but probably beginning at least one to two days before development of distinctive symptoms and persisting until the salivary gland has returned to its normal size, and patient is free of fever. Usually about 12 days.

#### **Recommendations.**

**Recognition of Disease.** Inflammation of Stenson's duct may be of assistance in recognizing the early stages of the disease. The diagnosis is usually made on swelling of the parotid gland.

**Exposed Susceptible Persons** should be regularly inspected for the onset for the presence of the initial symptoms of the disease such as fever, for swelling or pain of the parotid or adjacent lymph glands for three weeks from date of last exposure.

### **PARATYPHOID FEVER.**

#### **Regulations.**

**Placard.** None.

**Isolation.** In flyproof room, preferably under hospital conditions, of such patients as cannot command adequate sanitary environment and nursing care in their homes. Release from isolation should be determined by repeated negative cultures of stool and urine specimens collected not less than 24 hours apart and not earlier than one month after onset of the disease.

**Quarantine.** None.

**Concurrent Disinfection.** Disinfection of bowel and urinary discharges and articles soiled therewith.

**Terminal Disinfection.** Cleaning.

**Carriers** shall be under the supervision of the health officer, and shall be prohibited from engaging in occupations offering means for spread of disease, such as handling of food and milk.

**Sale of Milk** from infected premises prohibited except under certain conditions, see page 18.

#### **Information.**

**Infectious Agent.** Paratyphoid bacillus, A or B. (*Salmonella paratyphi*, *Salmonella schottmulleri*.)

**Source of Infection.** Bowel discharges and urine of infected persons, and food contaminated with such discharges of infected persons or of healthy carriers. Healthy carriers may be numerous in an outbreak.

**Mode of Transmission.** Directly, by personal contact; indirectly, by contact with articles freshly soiled with the discharges of infected persons, or through milk, water, or food contaminated by such discharges.

**Incubation Period.** Four to seven days; average seven days.

**Period of Communicability.** From the appearance of prodromal symptoms, throughout the illness and relapses, during convalescence, and until repeated bacteriological examinations of discharges show absence of the infecting organism.

#### **Recommendations.**

**Recognition of the Disease.** Clinical symptoms, confirmed by specific agglutination test, and by bacteriological examination of blood, bowel discharges or urine.

**Protection and Purification of water supplies.**

**Pasteurization of milk supplies.**

**Supervision of other food supplies and food handlers.**

**Prevention of fly breeding.**

**Sanitary Disposal of human excreta.**

**Extension of Immunization to persons subject to unusual exposure.**

**Supervision of paratyphoid carriers, and their exclusion from handling of food.**

**Systematic Examination** of fecal specimens, from those who have been in contact with recognized cases, to detect carriers.

**Exclusion** of suspected milk supply pending discovery of the person or other cause of contamination of the milk.

**Exclusion** of water supplies, if contaminated, until adequately treated with hypochlorite or other efficient disinfectant, or unless all water used for toilet, cooking, and drinking purposes, is boiled before use.

**PLAQUE (Bubonic, Septicemic, Pneumonic).****Regulations.**

**Placard.** Yes; (quarantine sign); during period of communicability.

**Isolation.** Patient in hospital, if practicable; if not, in a screened room which is free from vermin.

**Quarantine.** Rigid quarantine of contacts for seven days from last exposure.

**Concurrent Disinfection** of all discharges and articles freshly soiled therewith. Sputum and articles soiled therewith in pneumonic type.

**Terminal Disinfection.** Thorough cleaning followed by fumigation with sulphur for destruction of rats and fleas.

**Telegraphic Report** to State Board of Health required. See page 11.

**Information.**

**Infectious Agent.** Plague bacillus. (*Pasteurella pestis*.)

**Source of Infection.** Blood of infected persons and animals, and sputum of human cases of plague pneumonia.

**Mode of Transmission.** Direct, in pneumonic form. In other forms the disease is generally transmitted by the bites of fleas (*Xenopsylla cheopsis*, and *Ceratophyllus fasciatus*), by which the disease is carried from rats to man, also by fleas from other rodents; accidental, by inoculation, or by the bites of infected animals. Bedbugs may transmit the infection; flies may possibly convey the infection.

**Incubation Period.** Commonly, three to seven days, although occasionally prolonged eight or even fourteen days.

**Period of Communicability.** Pneumonic type intensely communicable during acute symptoms, Bubonic type not communicable from person to person.

**Recommendations.**

**Recognition of Disease.** Clinical symptoms confirmed by bacteriological examination of blood and pus from glandular lesions or sputum. Animal inoculation of material from suspected cases.

**Extermination** of rats and vermin by the use of known methods for their destruction; destruction of rats on vessels arriving from infected ports; examination of rats, ground squirrels, etc., in areas where the infection persists, for evidence of endemic or epidemic prevalence of the disease among them.

**Supervision** of autopsies of all deaths during epidemic.

**Supervision** of the disposal of dead during epidemic, whether by burial, transfer, or holding in vault, whatever the cause of death.

**Cremation or Burial in Quicklime** of those dying of this disease.

**In Plague Pneumonia**, personal prophylaxis to avoid droplet infection must be carried out by persons who come in contact with the sick. Masks of closely woven cloth with mica windows should be worn over the head and shoulders. A long gown and rubber gloves drawn over the sleeves of the gown should be provided. These articles should not be removed from the sick room until disinfected.

**Immunization.** Practicable only for persons to be exposed to unusual risks of infection.

**PNEUMONIA, PNEUMOCOCCAL****Regulations.**

**Placard.** None.

**Isolation** of patient during clinical course of disease.

**Quarantine.** None.

**Concurrent Disinfection** of discharges from nose and mouth of patient.

**Terminal Disinfection.** Thorough cleaning, airing and sunning.

**Information.**

**Infectious Agent.** Pneumococcus.

**Mode of Transmission.** By direct contact with an infected person or with articles freshly soiled with discharges from nose and mouth.

**Incubation Period.** Believed to be short, usually one to three days—not well determined.

**Period of Communicability.** Unknown; presumably until the mouth and nasal discharges no longer carry the infectious agent in an abundant amount or in a virulent form.

**Recommendations.**

**Recognition of the Disease.** An acute infection characterized by a sudden onset with chill followed by fever, chest pain, dyspnea and cough. X-ray findings are demonstrable early in the disease.

**In Institutions and Camps,** when practicable, people in large numbers should not be congregated closely within doors. The general resistance should be conserved by good feeling, fresh air, and other hygienic measures.

**Immunization.** None.

**PNEUMONIA, PRIMARY ATYPICAL****Regulations.**

**Placard.** None.

**Isolation** of patient during clinical course of disease.

**Quarantine.** None.

**Concurrent Disinfection.** Discharges from nose and throat of patient.

**Terminal Disinfection.** Thorough cleaning and airing.

**Information.**

**Infectious Agent.** The causative agent of the majority of atypical pneumonias is probably a virus.

**Mode of Transmission.** By direct contact with infected person or with articles freshly soiled with discharges of nose and throat of such person. Exposure to unrecognized cases may play a role in the spread of the disease.

**Incubation Period.** Uncertain, believed to be seven to twenty-one days.

**Period of Communicability.** Undetermined.

**Recommendations.**

**Recognition of Disease.** An insidious disease frequently without respiratory symptoms. Usually fatigue, muscular pains, chilliness and feverishness are symptoms presented. Diagnosis first made on X-ray examination.

**General Measures.** Avoid crowding in living and sleeping quarters in institutions.

## POLIOMYELITIS.

### Regulations.

**Placard.** Yes; (warning sign); minimum period, 21 days.

**Isolation.** For two weeks from onset. Almost invariably the period of restriction of visitors and care in bed desirable for the patient extends beyond the period of presumed communicability of the disease.

**Quarantine** of children in household, and of adults of household whose vocation brings them in contact with children, or who are handlers of food, for fourteen days from last exposure to a recognized case.

**Concurrent Disinfection.** Nose, mouth, and bowel discharges, and articles soiled therewith.

**Terminal Disinfection.** Cleaning.

### Information.

**Infectious Agent.** A specific filterable virus.

**Source of Infection.** Nose, mouth, and bowel discharges of infected persons or articles recently soiled therewith. Healthy carriers are supposed to be common.

**Mode of Transmission.** By direct contact with an infected person or with a carrier of the virus, or indirectly by contact with articles freshly soiled with nose, mouth, or bowel discharges of such person, and probably by drinking milk contaminated with nose, mouth, and bowel discharges of persons in active stage of the disease.

**Period of Communicability.** Unknown; apparently not more than 21 days from the onset of disease, but may precede onset of clinical symptoms by several days.

**Incubation Period.** Uncertain, because of inexact information as to period of communicability and essentials for exposure, but believed to be from seven to fourteen days.

### Recommendations.

**Recognition of Disease.** Clinical symptoms, assisted by chemical and microscopic examination of spinal fluid.

**Education** in such technique of bedside nursing as will prevent distribution of infectious discharges to others from cases isolated at home.

**Search** for, and examination of all sick children should be made. All children with fever should be isolated pending diagnosis.

**General Warning** to physician and the laity of prevalence or increased incidence of disease, description of usual characteristics of onset and necessity for diagnosis and medical care, particularly bed rest of patients.

**Protection** of children so far as practicable against unnecessary contact with other persons outside their own home.

**Postponement** of nose and throat operation on children.

**Avoidance** of physical strain and unnecessary travel and visiting in children.

## PSITTACOSIS (Parrot Disease).

### Regulations.

**Placard.** Yes; (warning sign); minimum, three weeks.

**Isolation in Home or Hospital.** Important during febrile and acute clinical stage of disease. The infectivity for patient to man is very low.

**Quarantine.** Building which housed birds should be quarantined until thoroughly cleaned and disinfected

**Concurrent Disinfection** of nose, mouth, and other discharges for patient and articles soiled with such discharges.

**Terminal Disinfection.** Thorough cleaning. Incriminated birds should be killed and their bodies immersed in two per cent eresol. The spleens then should be aseptically removed, part placed in equal parts of sterile glycerin and standard phosphate buffer solution of pH 7.5, and part in suitable fixative and both specimens sent to the nearest available laboratory for examination. Carcasses should be burned before feathers dry.

#### Information.

**Infectious Agent.** A specific filterable virus.

**Source of Infection.** Newly acquired ill parrots, parrakeets, love-birds, canaries. Apparently well birds occasionally transmit the infection.

**Mode of Transmission.** Directly from ill birds and their surroundings and directly from patient to patient although to much less extent.

**Incubation Period.** Six to fifteen days.

**Specific Therapy.** Convalescent serum is worth trial.

#### Recommendations.

**Recognition of the Disease** by clinical symptoms.

**Investigation of Source of Infection.** Carriers, apparently healthy birds occasionally carry the disease.

Buildings which house birds should be thoroughly cleaned and disinfected.

**Incriminated Birds.** Should be sacrificed and their bodies and cages burned.

## PUERPERAL INFECTION (Child Bed Fever)

#### Regulations.

**Placard.** None.

**Isolation** of patient during clinical course of disease.

**Quarantine.** None.

**Concurrent Disinfection** of discharges, especially in hospitals or maternity homes.

**Terminal Disinfection** should be done if the case has been in a hospital or maternity home.

#### Information.

**Infectious Agent.** Usually streptococcus.

**Incubation Period.** Unknown.

**Period of Communicability.** Until complete recovery.

#### Recommendations.

**Strict Asepsis** in obstetrical procedures with special attention to prevention of possible contamination by invisible spray from mouth and nose, as well as by direct transmission from hands, instruments, etc.

**Chemotherapy** and chemoprophylaxis are of great value in the treatment and prevention of these infections.

**Protection** of patient (during labor and the postpartum period) from attendants and visitors with respiratory tract infections.

**Education** of women in the hazards of self-interruption of pregnancy.

### RABIES (Hydrophobia).

#### Regulations.

**Placard.** None.

**Isolation.** None, if patient is under adequate medical supervision, and the immediate attendants are warned of possibility of inoculation by human virus.

**Quarantine.** None.

**Concurrent Disinfection** of saliva of patients and articles soiled therewith.

**Terminal Disinfection.** Thorough cleaning.

Report cases in animals to deputy state veterinarian. See page 65, Section XI, "Diseases in Animals."

#### Information.

**Infectious Agent.** A specific filterable virus.

**Source of Infection.** Saliva of infected animals, chiefly dogs.

**Mode of Transmission.** Inoculation with saliva of infected animals through abrasion of skin or mucous membrane, almost always by bites or scratches.

**Incubation Period.** Usually two to six weeks; may be prolonged to six months or even longer.

**Period of Communicability.** For fifteen days in dogs (not known in man), before the onset of clinical symptoms and throughout the clinical course of the disease.

#### Recommendations.

**Recognition of the Disease.** Clinical symptoms confirmed by presence of Negri bodies in the brain of an infected animal, or by animal inoculation with material from brain of such infected animal.

It should be required that all owned dogs in congested areas be kept on leash at all times when not within the homes of their owners. Muzzling is also recommended when on public streets or in places to which the public has access. Ownerless dogs should be destroyed by public authority.

**Detention and Examination** of dogs suspected of having rabies.

**Immediate Antirabic Treatment** of persons bitten by dogs or by other animals suspected or known to have rabies, unless the animal is proved not to be rabid by subsequent observation or by microscopic examination of brain and cord.

**Annual Immunization** of dogs where disease is present.

### ROCKY MOUNTAIN SPOTTED FEVER (Tick Fever).

#### Regulations.

**Placard.** None.

**Isolation.** None other than care exercised to protect patient from tick bites when in endemic areas.

**Quarantine.** None.

**Concurrent Disinfection.** None. All ticks on patient should be destroyed.

**Terminal Disinfection.** None.

**Telegraphic Report** to State Board of Health required. See page 11.

#### Information.

**Infectious Agent.** *Rickettsia Rickettsi.*

**Source of Infection.** Blood of infected animals and infected ticks. (Dermacentor species.)

**Mode of Transmission.** By bites of infected ticks or contact with tick material such as blood or feces or broken skin.

**Incubation Period.** Three to ten days, usually seven days.

**Period of Communicability** has not been definitely determined; probably during the febrile stage of the disease. Not communicable from man to man.

#### Recommendations.

**Recognition of the Disease** by clinical symptoms of the disease in areas where the disease is known to be endemic. Weil-Felix reaction may become positive toward end of second week.

**Personal Prophylaxis** of persons entering the infected zones during the season of ticks, by wearing tick-proof clothing, and careful daily search of the body for ticks which may have attached themselves.

**Destruction** of ticks by clearing and burning vegetation on the land in infected zones.

**Destruction** of ticks on domestic animals by dipping, and the pasturing of sheep on tick-infested areas where the disease is prevalent, with the object of diminishing the number of ticks.

**Destructions** of mammalian hosts, as ground squirrels, chipmunks, etc.

**Immunization.** The use of the Spencer-Parker vaccine in infected areas has given generally favorable results, but is still in the experimental stage.

## SCARLET FEVER AND SEPTIC SORE THROAT

#### Regulations.

**Placard.** Yes (quarantine sign); minimum period, fourteen days and until all abnormal discharges have ceased.

**Isolation.** In home or hospital, preferably in a single room, cubicle or small ward. This period, whether in the home or hospital, should be determined on the basis of the clinical course of the infection. In uncomplicated cases, the period of communicability should be completed within 14 days.

**Quarantine.** Children in infected household confined to premises, and teachers, other school employees, and food handlers excluded from their work until seven days have elapsed since last exposure to a recognized case.

**Concurrent Disinfection.** All objects which have been soiled by purulent discharges and all articles which have been in contact with the patient.

**Terminal Disinfection.** Thorough cleaning and sunning.

**Sale of Milk.** Prohibited except under certain conditions. See page 18.

**Information.**

**Infectious Agent.** Hemolytic streptococci of Lancefields Group A. Some strains produce an erythrogenic toxin causing a skin rash.

**Source of Infection.** Discharges from the nose, throat, or purulent complications of acutely ill or convalescent patients, or carriers, or objects contaminated with such discharges.

**NOTE.** Mastitis in the cow due to bovine streptococci is not a cause of septic sore throat in humans. Secondary infection of the udder by a human type of streptococcus is infectious to humans.

**Mode of Transmission.** Direct transmission can occur by contact with infected individuals during the incubation stage, during the acute infection, or during convalescence. Floor dust may be an important vehicle. Explosive outbreaks may follow the ingestion of contaminated milk or other food.

**Incubation Period.** Usually two to five days.

**Period of Communicability.** Minimum of two weeks from onset of disease without regard to stage or extent of desquamation, and only after all abnormal discharges have ceased, and open sores of wounds have healed.

**Recommendations.****Recognition of Disease.**

**Scarlet Fever:** Sudden onset with nausea, vomiting, and sore throat, high temperature, flushing of face, with circumoral pallor. The rash usually appears on the neck and chest, and spreads to remainder of body eight to twenty hours after onset. The rash is a fine erythema, punctate, blanching on pressure. There may be an exudate on throat or tonsils, or merely injected.

**Septic Sore Throat:** Usually identical to Scarlet Fever with no rash.

**Daily** examination of exposed children or other possibly exposed persons for a week after last exposure.

Schools should not be closed where daily observation of children by a physician or nurse can be provided for.

**Education** as to special danger of exposed young children to those exhibiting acute catarrhal symptoms of any kind.

**Exclusion** of infected persons from handling milk or milk products.

**Pasteurization** of all milk.

**Exclusion** of the milk from any cow with evidence of mastitis.

**Immunization.** By active immunization a potential Scarlet Fever patient can be made Dick negative. This will not protect the individual against streptococcal infection.

**SMALLPOX.****Regulations.**

**Placard.** Yes; (quarantine sign); a minimum period of 28 days.

**Isolation.** During the period of communicability, and preferably in a hospital.

**Quarantine** of all exposed persons for sixteen days after last exposure. Provided, contacts may be released to take up residence elsewhere (a) when showing immunity reaction after being vaccinated with virus of full potency

regardless of previous vaccination or history of having had the disease; (b) if vaccinated within twenty-four hours after first exposure, when vaccinia reaches height.

**Concurrent Disinfection** of all discharges and articles soiled therewith.

**Terminal Disinfection.** Thorough cleaning and disinfection of premises.

#### Information.

**Infectious Agent.** A specific virus.

**Source of Infection.** Lesions of mucous membrane and skin of infected persons.

**Mode of Transmission.** By direct personal contact; by articles soiled with discharges from lesions. The virus may be present in all body discharges including feces and urine. It may be carried by flies.

**Incubation Period.** Eight to sixteen days (cases with incubation period of twenty-one days are reported).

**Period of Communicability.** From first symptoms to disappearance of all scabs and crusts, which may be as much as 40 days.

#### Recommendations.

**Recognition of Disease.** Clinical symptoms. Tests for immunity may prove useful.

**General Vaccination** in early infancy, revaccination of children on entering school, and of entire population when disease is prevalent.

In order to avoid possible complications or secondary subsequent infection at the site of vaccination, it is important that the vaccination insertion be as small as practicable, not over one-eighth inch in any direction, and that the site be kept dry and cool. The multiple-pressure method as recommended by the U. S. Public Health Service, is the method preferred. Primary vaccination between the ages of two and three months is particularly desirable. The time of vaccination should be adjusted to avoid skin lesions elsewhere on the body; in infants to avoid teething, and in older children to avoid warmer months. Particular care should be used in primary vaccination beyond the age of infancy. Warning—shields and covers of any kind are to be avoided.

**Preservation of Smallpox** vaccine below freezing (vaccine can be conveniently stored in freezing units of refrigerators) up to hour of vaccination. This includes shipment between cakes of dry ice.

## TETANUS.

#### Regulations.

**Placard.** None.

**Isolation.** None.

**Quarantine.** None.

**Concurrent Disinfection.** None.

**Terminal Disinfection.** None.

#### Information.

**Infectious Agent.** Tetanus bacillus (*Clostridium tetani*).

**Source of Infection.** Animal manure, soil, and street dust.

**Mode of Transmission.** Inoculation, or wound infection, especially puncture wounds.

**Incubation Period.** Four days to three weeks, or longer, if latent bacilli deposited in the tissues are stirred to activity by subsequent chemical or mechanical irritation; commonly eight to ten days.

**Period of Communicability.** Patient not infectious except in rare instances where wound discharges are infectious.

#### Recommendations.

**Clinical Symptoms.** May be confirmed bacteriologically.

**Proper Asepsis** and antisepsis in obstetrical practice

**Educational Propaganda** such as "safety-first" campaign, and "safe and sane Fourth of July" campaign.

**Immunization.** Active immunization with tetanus toxoid is desirable for those likely to be exposed to infection with tetanus. In the absence of adequate previous immunization with tetanus toxoid reinforced by another injection of toxoid at the time of injury, a person who has been wounded in such a way that there is danger from tetanus should receive a subcutaneous injection of tetanus antitoxin, 1,500 U. S. A. units (3,000 international units), on the day of the wound. A 2nd injection within 10 days may be desirable in certain instances.

Prophylactic active immunization is advised in infancy or early childhood in those areas where there is a special risk of tetanus. In addition to the initial immunization with the doses and intervals between injections recommended for the particular form of toxoid used, another dose should be given within a year, and renewal doses at the time of each injury from which there is danger of tetanus. Since no exposure to infection ordinarily occurs to maintain immunity to this disease, re-injections in the absence of injuries should probably be kept up with intervals no longer than 5 years. It is also important that the person should have with him at all times a record of his immunization in case of injury. Tetanus toxoid under such conditions has proved a more efficient and less dangerous method of prevention than tetanus antitoxin.

**Removal** of all foreign matter as early as possible from all wounds.

## TRACHOMA.

#### Regulations.

**Placard.** None.

**Isolation.** Exclusion of patient from general school classes during period of active lesion of conjunctivae and adnexal mucous membranes.

**Quarantine.** None.

**Concurrent Disinfection.** Of all discharges from conjunctivae and adnexal mucous membranes of infected persons and articles freshly soiled therewith.

**Terminal Disinfection.** None.

**Enforcement Regulation**, page 19, prohibiting use of common towel and toilet articles in public places.

#### Information.

**Infectious Agent.** A specific filterable virus.

**Source of Infection.** Secretions and purulent discharges from the conjunctivae and adnexal mucous membranes of the infected person.

**Mode of Transmission.** By direct contact with infected persons, and indirectly by contact with articles freshly soiled with the infected discharges of such persons.

**Incubation Period.** Undetermined.

**Period of Communicability.** During the persistence of lesions of the conjunctivae and the adnexal mucous membranes, or the discharges from such lesions. Probably throughout the life of the infected individual especially to family contacts.

#### Recommendations.

**Recognition of Disease.** Clinical symptoms.

Search for cases by examination of school children, of immigrants and among the families and associates of recognized cases; in addition, search for acute secreting disease of conjunctivae and adnexal mucous membranes, both among school children and in their families, and treatment of such cases until cured.

**Education** in the principles of personal cleanliness and the necessity of avoiding direct or indirect transference of body discharges.

**Supervision and Control** of persons and establishments dispensing eye remedies.

**Note.** The State Board of Health of Missouri maintains a Trachoma Hospital at Rolla, for the free treatment of persons infected with this disease. Applications for admission should be directed to the Hospital.

## TRICHINOSIS.

#### Regulations.

**Placard.** None.

**Isolation.** None.

**Quarantine.** None.

**Concurrent Disinfection.** None.

**Terminal Disinfection.** None.

#### Information.

**Infectious Agent.** *Trichinella spiralis*.

**Source of Infection.** Uncooked or insufficiently cooked meat of infected hogs.

**Mode of Transmission.** Consumption of undercooked infected pork products.

**Incubation Period.** Variable; usually about one week.

**Period of Communicability.** Disease is not transmitted by human host.

#### Recommendations.

**Recognition of the Disease.** Clinical symptoms confirmed by microscopic examination of muscle tissue containing trichinae.

**Inspection** of pork products for the detection of trichinosis.

**Thorough Cooking** of all pork products at a temperature of 160 degrees F., 71 degrees C., or over, unless it is known the meat has been processed under federal or other official regulations, adequate for destruction of trichinae.

**Extermination** of rats, especially in areas where the infection persists.

**TUBERCULOSIS (Pulmonary).****Regulations.**

**Placard.** None, unless "open" case does not observe the precautions necessary to prevent the spread of the disease.

**Isolation** of such "open cases" as do not observe the precautions necessary to prevent the spread of the disease. A period of hospital or sanatorium care is very desirable to remove patient as a focus of infection from home, and to teach him the hygiene essentials of the control and increase chances of recovery.

**Quarantine.** None.

**Concurrent Disinfection** of sputum and articles soiled with it. Particular attention should be paid to prompt disposal or disinfection of sputum itself, of handkerchiefs, cloths, or paper soiled therewith. The eating utensils used by the patient should be thoroughly boiled and used only by the patient.

**Terminal Disinfection.** Cleaning and renovation.

**Enforcement** of regulation, page 19, prohibiting spitting.

**Enforcement** of regulation, page 15, prohibiting the use of common drinking cups and eating utensils in public places.

**Enforcement** of regulation, page 18, prohibiting use of milk from infected animals.

**Enforcement** of regulation, page 18, prohibiting patient with open lesions from handling food.

**Information.**

**Infectious Agent.** Tuberle bacillus (human), *Mycobacterium tuberculosis* (hominis). In rare instances the bovine tubercle bacillus has been proved to be the cause of pulmonary tuberculosis.

**Source of Infection.** The specific organism present in the discharges, or articles freshly soiled with the discharges from open tuberculous lesions, the most important discharge being sputum. Of less importance are the discharges from the intestinal and genitourinary tract, or from lesions of the lymph glands, bone and skin.

**Mode of Transmission.** Direct or indirect contact with an infected person by coughing, sneezing, or other droplet infection, kissing, common use of unsterilized food utensils, pipes, toys, drinking cups, etc., and possibly by contaminated flies and dust.

**Incubation Period.** Variable, and dependent upon the type of the disease.

**Period of Communicability.** Exists as long as the specific organism is eliminated by the host. Commences when the lesion becomes an open one, i. e., discharging tubercle bacilli, and continues until it heals or death occurs.

**Recommendations.**

Recognition of the disease—by thorough physical examination supplemented by use of X-ray and specific skin reactions when necessary, and confirmed by bacteriological examinations of sputum or other materials.

**Education** of public in regard to dangers of tuberculosis, and methods of control with special stress upon the danger of exposure and infection in early childhood. Provisions for dispensaries and visiting-nurse service for discovery of early cases and supervision of home cases.

**Provision** of hospitals or sanatoria for isolation and treatment of active cases. (At least 2 beds should be provided per annual Tbc death in the community.)

**Provision** of open-air school.

**Improvement** of house conditions and nutrition of the poor.

**Elimination** of silica dust in dangerous quantities in industrial establishments.

**Improvement** in habits of personal hygiene, and betterment of general living conditions.

**Separation** of babies from tuberculous mothers at birth.

### **TUBERCULOSIS (Other Than Pulmonary).**

#### **Regulations.**

**Placard.** None.

**Isolation.** None.

**Quarantine.** None.

**Concurrent Disinfection** of discharges and articles freshly soiled with them.

**Terminal Disinfection.** Cleaning.

**Enforcement** of regulation, page 18, prohibiting sale of milk from infected animals.

**Enforcement** of regulation, page 65, prohibiting use of meat of infected animals for human consumption unless slaughtering is done under adequate public supervision.

**Enforcement** of regulation, page 18, prohibiting persons with open lesions in engaging in preparation and handling of food.

#### **Information.**

**Infectious Agent.** *Bacillus tuberculosis* (human and bovine). *Microbacterium tuberculosis* (*hominis et bovis*).

**Source of Infection.** Discharges of mouth and nose, bowels and genitourinary tract of infected humans; articles freshly soiled with such discharges; milk and meat from tubercular cattle; rarely the discharging lesion of bones, joints and lymph nodes.

**Mode of Transmission.** By direct contact with infected persons; by contaminated food; and possibly by contact with articles freshly soiled with the discharges of infected persons.

**Incubation Period.** Unknown.

**Period of Communicability.** Until lesions are healed.

#### **Recommendations.**

**Recognition of the disease.** Clinical symptoms confirmed by bacteriological and serological examination.

**Pasteurization** of milk and inspection of meat.

**Eradication** of tuberculous cows from milch herds used in supplying raw milk.

## TULAREMIA.

## Regulations.

**Placard.** None.

**Isolation.** None.

**Quarantine.** None.

**Concurrent Disinfection.** Destruction of discharges from the ulcer, lymph glands or conjunctival sac.

**Terminal Disinfection.** None.

## Information.

**Infectious Agent.** *Bacterium Tularensis* (*Pasteurella tularensis*).

**Source of Infection.** Most any wild animals, especially rabbits; also infected laboratory animals, infected flies (*Chrysops discalis*) and ticks (*Dermacentor andersoni*).

**Mode of Transmission.** By bites of infected flies and ticks, and by inoculation through handling infected animals, as dressing rabbits for market, in cooking, or in performing necropsies on infected laboratory animals. Eye infections have been caused by contamination of the conjunctival sac with portions of the internal organs or with body fluids of infected flies, ticks, and wild rabbits by drinking contaminated water.

**Incubation Period.** From twenty-four hours to nine days; average slightly more than three days.

**Period of Communicability.** There is no authentic record of transference of the disease from man to man. The infection has been found in the blood during the first two weeks; in conjunctival scrapings, and in lymph glands up to seventeen days; in the spleen taken at autopsy up to twenty-six days. Flies are infective for fourteen days, ticks during their lifetime. Refrigerated wild rabbits are infective for three weeks.

## Recommendations.

**Recognition** of the disease by clinical symptoms of the disease, by animal inoculation with infective material, and by agglutination reaction.

**Avoidance** of the bites or of handling of flies and ticks when working in the infected zone during the seasonal incidence of the deer fly and tick.

**Use of Rubber Gloves** by persons engaged in dressing wild rabbits wherever taken, or when performing necropsies on infected laboratory animals. Employment of immune persons for dressing wild rabbits or conducting laboratory experiments. Thorough cooking of meat of wild rabbits.

**Avoidance** of raw drinking water in areas where the disease prevails among wild animals.

## TYPHOID FEVER.

## Regulations.

**Placard.** None.

**Isolation.** In fly-proof room, preferably under hospital conditions, of such cases as cannot command adequate environment and nursing care in their homes.

**Release** after clinical recovery and after two cultures of stool and urine specimens collected not less than twenty-four hours apart fail to show presence of infecting organism. Provided further, carriers may be released under

supervision of health officer but prohibited from engaging in occupations connected with the production or distribution of milk and other foods.

**Quarantine.** None.

**Concurrent Disinfection.** Disinfection of all bowel and urinary discharges and articles soiled with them.

**Terminal Disinfection.** Cleaning.

**Enforcement** of regulation, page 18, prohibiting sale of milk from infected premises.

**Enforcement** of regulations, page 18, prohibiting infected persons (acute or carrier stage) from engaging in the production or distribution of food.

### Information.

**Infectious Agent.** Typhoid bacillus (*Escherichia typhi*).

**Source of Infection.** Bowel discharges and urine of infected individuals. Healthy carriers are common.

**Mode of Transmission.** Conveyance of specific organism by direct or indirect contact with a source of infection. Among indirect means of transmission are contaminated water, milk, and shellfish. Contaminated flies have been common means of transmission in epidemics.

**Incubation Period.** Three to thirty-eight days, average seven to fourteen days.

**Period of Communicability.** From appearance of prodromal symptoms, throughout the illness and relapses during convalescence, and until repeated bacteriological examinations of the discharges show persistent absence of the infecting organism.

### Recommendations.

**Recognition of disease:** Clinical symptoms confirmed by specific agglutination test, and bacteriological examination of blood, bowel discharges, or urine.

**Protection and purification of water supplies.**

**Pasteurization of milk supplies.**

**Supervision of food supplies and of food handlers.**

**Prevention of fly breeding.**

**Sanitary Disposal of human excreta.**

**Immunization** of persons subject to unusual exposure by reason of occupation or travel, those living in areas of high endemic incidence of typhoid fever and those for whom immunization can be systematically and economically applied, as in the military forces and institutional populations.

Supervision and instruction of typhoid carriers, in personal hygiene, particularly as to sanitary disposal of excreta and handwashing, and their exclusion from the handling of foods.

**Systematic Examination** of fecal specimens from those who have been in contact with recognized cases, to detect carriers.

**Exclusion** of suspected milk supplies pending discovery of the person or other cause of contamination of the milk.

**Exclusion** of water supply, if contaminated, until adequately treated with hypochlorite or other efficient disinfectant or unless all water used for toilet, cooking, and drinking purposes is boiled before use.

## TYPHUS FEVER AND BRILLS DISEASE.

## Regulations.

**Placard.** Yes (quarantine sign); during period of communicability.

**Isolation** after delousing, in vermin-free room, or hospital ward.

**Quarantine.** Rigid quarantine of contacts for fifteen days after delousing following last exposure.

**Concurrent Disinfection.** Use of insecticide powders on clothing and bedding of patient and contacts, and special treatment of hair for louse eggs (nits) according to special directions. See D.D.T. page 67.

**Terminal Disinfection.** None.

Telegraphic Report to State Board of Health required. See page 11.

## Information.

**Infectious Agent.** Rickettsia prowazekii.

**Source of Infection.** Blood of infected individuals.

**Mode of Transmission.** **Typhus Fever**—The infectious agent is transmitted from man to man by lice (*Pediculus humanus*). **Brills Disease**—The agent is transmitted from rodent to man by the rat flea (*Xenopsylla cheopis*). The Rickettsia are inoculated by crushing the infected lice or scratching louse feces into superficial abrasion.

**Incubation Period.** Five to twenty days, usually twelve days.

**Period of Communicability.** During febrile illness and possibly for 2 to 3 days after temperature returns to normal the patient is infective for lice.

## Recommendations.

**Recognition of disease.** Clinical symptoms, confirmed by agglutination test. Weil-Felix reaction.

**Delousing** of persons, clothing, and premises during epidemics, or when they have come or have been brought into an uninfected place from an infected community.

**Immunization.** Vaccine is administered in 3 doses and confers considerable protection. The length of time for which it may be expected to give full protection is not known. Re-immunization with a single dose should be given every few months where the danger of typhus is present. In vaccinated persons the risk of infection is reduced, the course of the disease modified, and the case fatality rate lowered.

## UNDULANT FEVER OR BRUCELLOSIS.

## Regulations.

**Placard.** None.

**Isolation.** None.

**Quarantine.** None.

**Concurrent Disinfection** of all discharges, especially the urine, and of articles soiled with such discharges.

**Terminal Disinfection.** Cleaning.

Supervision of human carriers and their exclusion from the handling of foods and milk.

**Information.**

**Infectious Agent.** *Brucella abortus, suis or melitensis.*

**Source of Infection.** The tissues, blood, milk, and urine of infected animals, especially goats, cattle, and swine. Laboratory infections take place readily.

**Mode of Transmission.** By ingestion of milk from infected animals and by direct contact with infected animals or animal products.

**Incubation Period.** Six to thirty days or more.

**Period of Communicability.** Practically not communicable from person to person, but the organism may be present in the urine or other discharges.

**Recommendations.**

**Recognition of Disease.** The clinical picture and particularly the undulant character of the fever, supplemented by exact determination through the use of agglutination test, and bacteriological examination of the blood and urine from the infected person or animal.

**Pasteurization of milk whether from cows or goats.**

**Search** for infection among livestock by agglutination reaction and elimination of infected animals from the herd by segregation or slaughter.

**Education** of the public and particularly workers in slaughter houses, packing houses and butcher shops, as to the nature of the disease, the mode of transmission, and the danger of handling carcasses or products of infected animals.

Vaccination of calves with attenuated strain of *Brucella abortus* is accepted as a practicable measure in the prevention of Bangs disease when the animal reaches maturity.

### WHOOPING COUGH (Pertussis).

**Regulations.**

**Placard.** None.

**Isolation.** Separation of patient from susceptible children, and exclusion of patient from school and public places for the period of presumed infectivity, minimum, five weeks.

**Quarantine.** Limited to the exclusion of non-immune children from school and public gatherings for 14 days after their last exposure to a recognized case. This applies to exposures in the household or under other similar conditions. This precaution may be omitted if exposed nonimmune children are observed with care by a physician or nurse on their arrival at school each day for 14 days after their last exposure to a recognized case.

**Concurrent Disinfection.** Discharges from nose and mouth of patient and articles soiled with such discharges.

**Cleaning** of premises used by the patient.

**Information.**

**Infectious Agent.** Pertussis bacillus of Bordet and Gengou. (*Hemophilus pertussis*.)

**Source of Infection.** Discharges from the laryngeal and bronchial mucous membrane of infected persons (rarely also of infected dogs and cats which are known to be susceptible).

**Mode of Transmission.** Contact with an infected person or animal or with articles freshly soiled with the discharges of such person or animal.

**Incubation Period.** Commonly seven days, almost uniformly within ten days.

**Period of Communicability.** Particularly communicable in the early catarrhal stages before the characteristic whoop makes a clinical diagnosis possible. The catarrhal stage occupies from seven to fourteen days. After the characteristic whoop has appeared the communicable period continues certainly for three weeks. Even if the spasmodic cough with whoop persists longer than this, it is most unlikely that the infecting organism can be isolated from the discharges. The communicable stage must be considered to extend from seven days after exposure to an infected individual to three weeks after the development of the characteristic whoop.

#### Recommendations.

**Recognition of Disease.** Clinical symptoms, supported by a differential leucocyte count, and confirmed where possible by bacteriological examination of bronchial secretions. A positive diagnosis may be made by bacteriological examination of laryngeal discharges as early as one week before the development of the characteristic whoop.

**Immunization.** Artificial active immunization with appropriate agent between 3rd and 6th month will prevent disease in some instances, cause a mild attack in the remainder when the child is exposed in subsequent life.

**Education** in habits of personal cleanliness, and in the dangers of association or contact with those showing catarrhal symptoms and cough. Warning—every effort should be made to prevent infection of children, *especially* those below 2 years of age.

## YELLOW FEVER.

#### Regulations.

**Placard.** Yes (quarantine sign), during period of communicability. A minimum of seven days.

**Isolation.** Isolate from mosquitoes in a special hospital ward or a thoroughly screened room. If necessary the room or ward should be freed from mosquitoes by fumigation. Isolation necessary only for first four days of fever.

**Quarantine.** None.

**Concurrent Disinfection.** Destroy mosquitoes in house of patient.

**Terminal Disinfection.** Upon termination of case the premises should be rendered free from mosquitoes by fumigation.

**Telegraphic Report to State Board of Health required.** See page 11.

#### Information.

**Infectious Agent.** A specific filterable virus.

**Source of Infection.** Blood of infected persons.

**Mode of Transmission.** By bite of infected Aedes aegypti mosquitoes.

**Incubation Period.** Three to five days; occasionally six.

**Period of Communicability.** Two days prior to onset of fever and for the first 3 days of fever, possibly 4. High degrees of communicability where infected mosquitoes abound and there are many susceptible persons. Aedes aegypti is infectious for susceptible persons beginning 10 to 21 days after

biting an infected person (4 or 5 days if kept at 37 degrees C. (98.6 degrees F.) ) and presumably remains infectious throughout the life of the insect.

**Recommendations.**

**Recognition of Disease.** Clinical symptoms.

**Elimination** of mosquitoes by rendering breeding impossible.

**Inspection** service for the detection of those ill with disease.

**Fumigation** of houses in which cases of disease have occurred, and of all adjacent houses.

**Destruction** of *Aedes aegypti* mosquitoes by fumigation; use of larvicide; eradication of breeding places.

**Immunization.** Immunity quickly conferred by a single inoculation with attenuated strain. Protection lasts 4 years or longer.

---

## SECTION VIII.

### SPECIFIC MEASURES FOR THE CONTROL OF DISEASES ENUMERATED IN SECTION I, DIVISION B, AS FOLLOWS:

#### SECTION I, DIVISION B.

##### Diseases Communicable and Dangerous to Public Health.

Chancroid

Gonorrhea

Syphilis

*Lymphopathia venereum*

*Granuloma inguinale*

In addition to the general measures enumerated in the foregoing sections, the following rules and procedures shall apply to diseases enumerated in this section:

#### CERTIFICATES OF FREEDOM FROM VENEREAL DISEASES PROHIBITED.

Physicians, health officers, and all other persons are prohibited from issuing certificates of freedom from venereal diseases; provided this rule shall not prevent the issuance of necessary statements of freedom from infectious diseases written in such form or given under such safeguards that their use in solicitation of sexual intercourse would be impossible.

#### PHYSICIAN SHALL MAKE REPORT OF VENEREAL DISEASE.

Every physician, or other person who makes a diagnosis in or treats a case of syphilis, gonorrhea, chancroid, *lymphopathia venereum*, or *granuloma inguinale* and every superintendent or manager of a hospital, dispensary or charitable or penal institution, in which there is a case of venereal disease, shall report such case immediately in writing on forms provided by the State Board of Health to the local or district health officer stating the name or initials and address or the office number and age, sex, color and occupation of the diseased person, and the date of the onset of the disease, and probable source of infection.

**LOCAL HEALTH OFFICIALS TO INVESTIGATE  
SUSPECTED CASES.**

All city, county and district health officers, and local Boards of Health shall use every available means to ascertain the existence of, and investigate all cases of syphilis, gonorrhea, chancroid, lymphopathia venereum, or, granuloma inguinale in their jurisdiction. Such health officers and Boards of Health are empowered and directed to examine for venereal disease all persons reasonably suspected of having such diseases including all persons held in custody by law enforcement officers. It shall be the duty of law enforcement officers to notify the local health officials when such persons are being held.

**QUARANTINE MAY BE ESTABLISHED TO PREVENT THE  
SPREAD OF VENEREAL DISEASES.**

Any person having or reasonably suspected of having, any disease enumerated in Division B, Section I, Book IV, shall be subjected to quarantine, provided:

1. Such person is a prostitute, or
2. Such person is without visible means of support, or
3. Such person does not finance his own medical care, or
4. Such person cannot finance his or her own medical care.
5. Such person refuses or fails to report regularly for treatment.
6. The local health officer has declared such person to be a menace to the public health, or
7. That such person has been named repeatedly as a source of venereal disease.

In establishing quarantine, the city, county, or district health officer shall designate a place and define the limits of the area in which the suspect shall be quarantined and no other person except the attending physician, shall enter or leave said quarantined area without the permission of the proper health authority.

For the purpose of quarantine all city, county or district health offices or other local boards of health are authorized, in addition to local areas, to designate as the place of quarantine any isolation treatment center within the State of Missouri including treatment centers of the United States Public Health Service as the State Board of Health may direct.

No one shall have the authority to terminate said quarantine except the officer responsible for it and then only after the disease has become non-infectious as determined by the said health officer or his authorized agent or the medical director of any isolation treatment center.

**(Section 9750, R. S. 1939) Penalty for Violation.**

Any person or persons violating, refusing or neglecting to obey the provisions of this article or any of the rules and regulations or procedure made by the State Board of Health in accordance with this article, or who shall leave any pesthouse, or isolation hospital, or quarantined house, or place without the consent of the health officer having jurisdiction, or who evades or breaks quarantine or knowingly conceals a case of contagious, infectious, or communicable disease, or who removes, destroys, obstructs from view or tears down any quarantine card, cloth or notice posted by the attending physician or by the health officer, or by direction of a proper health officer, shall be guilty of a misdemeanor.

**NO ONE EXCEPT LICENSED PHYSICIAN TO PRESCRIBE FOR VENEREAL DISEASE.**

No druggist or other person not a licensed physician shall prescribe or recommend to any person any drugs, medicine, or other substance to be used for the cure of gonorrhea, syphilis, chancreoid, lymphopathia venereum or granuloma inguinale or shall compound any drugs or medicine for said purpose from any written formula or order not written for the person for whom the drug or medicines are compounded and not signed by a physician, licensed under the laws of the State.

**CHANCROID.****Regulations.**

**Placard.** Yes. (Quarantine sign.)

**Isolation.** Exclusion from intimate personal contact with others until lesions are healed.

**Quarantine.** See paragraph on page 58 concerning Quarantine to Prevent Spread of Venereal Diseases.

**Concurrent Disinfection** of all discharges from lesion and articles soiled therewith.

**Terminal Disinfection.** None.

**Information.**

**Infective Agent.** Bacillus of Ducery (*Hemophilus ducreyi*).

**Source of Infection.** Discharges from lesions and articles freshly soiled therewith.

**Mode of Transmission.** Direct personal contact with infected persons and indirectly by contact with discharges from lesions.

**Incubation period.** One to 10 days, usually 3 to 5 days.

**Period of communicability.** As long as the etiological agent persists in the original lesion or regional adenitis. There is some evidence that carriers of the *Hemophilus ducreyi* may result from former but healed Chancreoidal infections.

**Recommendations.**

**Recognition of Disease.** Clinical symptoms confirmed by microscopic examination of discharges.

**Education in Matters of Sex Hygiene,** particularly as to the fact that continence in both sexes and at all ages is compatible with health and development.

**Provisions for Accurate and Early Diagnosis and Treatment,** in hospitals and dispensaries of infected persons, with consideration for privacy of records, and provisions for following cases until cured.

**Repression of Prostitution** by use of police power and control of use of living premises.

**Personal Prophylaxis** should be advised to those who expose themselves to infection.

**Adequate epidemiological service.**

## GONORRHEA.

### Regulations.

**Placard.** Yes. (Quarantine sign.)

**Isolation.** When the lesions are in the genitourinary tract, exclusion from sexual contact, and when the lesions are conjunctival, exclusion from school or contact with children, as long as the discharges contain gonococeus. Persons in the communicable stage should not be allowed to engage in occupations involving the handling of children.

**Quarantine.** See paragraphs on page 58 concerning Quarantine to Prevent Spread of Venereal Diseases.

**Concurrent Disinfection** of all discharges from lesions and articles soiled therewith.

**Terminal Disinfection.** None.

**Enforcement of Regulation**, page 19, prohibiting use of common towel.

**Enforcement of Regulation**, page 15, relative to use of silver nitrate in eyes of newborn.

### Information.

**Infectious Agent.** Gonococeus (*Neisseria gonorrhoeae*).

**Source of Infection.** Discharges from lesions of inflamed mucous membranes and glands of infected persons, viz.: urethral, vaginal, cervical, conjunctival, mucous membranes and Bartholin's or Skene's glands in female, and Cowper's and prostate glands in male.

**Mode of Transmission.** By direct personal contact with infected persons, and indirectly by contact with articles freshly soiled with the discharge of such person.

**Period of Communicability.** As long as the gonococeus persists in any of the discharges, whether the infection be an old or a recent one.

**Incubation Period.** One to eight days, rarely longer, usually 3 to 5 days.

### Recommendations.

**Recognition of the Disease.** Clinical symptoms, confirmed by bacteriologic examinations.

**Education in Matters of Sex Hygiene**, particularly as to the fact that continence in both sexes at all ages is compatible with health and development.

**Provision for Adequate Epidemiological Services and Accurate and Early Diagnosis**, and treatment in hospitals and dispensaries of infected persons with consideration for privacy of records and provision for following cases until cured.

**Repression of Prostitution** by use of police power and control of use of living premises.

**Restriction of Advertising of services or medicine for treatment of sex diseases, etc.**

**Personal Prophylaxis** should be advised to those who expose themselves to infection.

**Use of prophylactic silver solution in the eyes of the new born.**

**SYPHILIS.****Regulations.**

**Placard.** Yes. (Quarantine sign.)

**Isolation** of the patient until he is rendered noncommunicable. No patient should render personal service, or indulge in sexual intercourse until no longer in the communicable stage.

**Quarantine.** See paragraphs on page 58 concerning Quarantine to Prevent Spread of Venereal Diseases.

**Concurrent Disinfection** of all discharges from lesions and articles soiled therewith,

**Terminal Disinfection.** None.

**Enforcement of Regulations**, page 15, prohibiting use of common drinking cup and eating utensils.

**Enforcement of Regulations**, page 19, prohibiting use of common towel.

**Enforcement of Regulations**, page 18, relative to health of food handlers.

**Information.**

**Infecting Agent.** *Treponema pallidum*.

**Source of Infection.** Discharges from the lesions of skin and mucous membrane, and the blood of infected persons, and articles freshly soiled with such discharges, or blood in which the *Treponema pallidum* is present.

**Mode of Transmission.** Direct personal contact with infected persons and indirectly by contact with the discharges from lesions or with blood of such persons.

**Incubation Period.** About three weeks. (In rare instances reported to have been as long as seventy days.)

**Period of Communicability.** As long as the lesions are open upon the skin, or the mucous membranes at any stage of the disease and until the patient has received at least twenty doses of bismuth and twenty doses of arsenic in a continuous treatment, or adequate treatment with Penicillin.

**Recommendations.**

**Recognition of the Disease.** Clinical symptoms confirmed by laboratory studies. (Darkfield examination and serology.)

**Education in Matters of Sex Hygiene**, particularly as to the fact that continence in both sexes is compatible with health and development.

**Provision for Accurate and Early Diagnosis**, and treatment in hospitals or clinics with consideration for privacy of records and following cases until cured.

**Repression of Prostitution** by use of police power and control of use of living premises.

**Restriction of Advertising** of services or medicine for treatment of sex diseases, etc.

**Personal Prophylaxis** should be advised to those who expose themselves to infection.

**Investigation of source of infection.** All members of the family of a patient with congenital syphilis should be examined.

**LYMPHOPATHIA VENEREUM.****Regulations.**

**Placard.** None; provided patient is receiving adequate treatment and not exposing others to the infection.

**Isolation.** Exclusion of infected person from sexual contacts during the prevalence of open lesions.

**Quarantine.** See paragraphs on page 58 concerning quarantine to Prevent Spread of Venereal Diseases.

**Concurrent Disinfection** of all discharges from lesions and articles soiled therewith.

**Terminal Disinfection.** None.

**Information.**

**Infectious Agent.** A specific filterable virus.

**Source of Infection.** Discharges from lesions and glands of infected persons.

**Mode of Transmission.** By direct personal contact with infected persons and indirectly by contact with articles freshly soiled with the discharges of such persons.

**Period of Communicability.** As long as a contaminating discharge is present, whether it be from a urethritis, proctitis, discharging sinus, or open ulcerative lesion.

**Incubation Period.** From five to twenty-one days.

**Recommendations.**

**Recognition of the Disease** by clinical symptoms, confirmed by diagnostic tests.

**Education in Matters of Sex Hygiene**, particularly as to the fact that continence in both sexes at all ages is compatible with health and development.

**Provision for Accurate and Early Diagnosis**, and treatment in hospitals and dispensaries of infected persons with consideration for privacy of records and provision for following cases until cured.

**Repression of Prostitution** by use of police power and control of use of living premises.

**Restriction of Advertising** of services or medicines for treatment of sex diseases, etc.

**Exclusion of Persons** in communicable stage of disease from participation in the preparing and serving of food.

**Investigation** of the source of the infection.

**GRANULOMA INGUINALE.****Regulations.**

**Placard.** None; provided patient is receiving adequate treatment and not exposing others to the infection.

**Isolation.** Exclusion of infected person from sexual contact.

**Quarantine.** See paragraphs on page 58 concerning quarantine to Prevent Spread of Venereal Diseases.

**Concurrent Disinfection** of all discharges from lesions and articles soiled herewith.

**Terminal Disinfection.** None.

#### **Information.**

**Infectious Agent.** The Donovan body.

**Source of Infection.** Discharges from lesions.

**Mode of Transmission.** By direct personal contact with infected persons and indirectly by contact with articles freshly soiled with the discharges of such person.

**Period of Communicability.** As long as discharge occurs from lesions.

**Incubation Period.** Variable. From one to twelve weeks.

#### **Recommendations.**

**Recognition of the Disease.** By clinical symptoms, confirmed by bacteriologic examination.

**Education in Matters of Sex Hygiene,** particularly as to the fact that continence in both sexes at all ages is compatible with health and development.

**Provision for Accurate and Early Diagnosis,** and treatment in hospitals of infected persons with consideration for privacy of records and provision for following cases until cured.

**Repression of Prostitution** by use of police power and control of use of living premises.

**Personal Prophylaxis** should be advised to those who expose themselves to infection.

**Investigation of source of infection.** Search for and examination of sexual contacts of case with primary lesions. Among married persons examination of the marital partner regardless of the stage of the disease in the original case.

---

## **SECTION IX.**

### **SPECIFIC MEASURE FOR THE CONTROL OF DISEASES ENUMERATED IN SECTION I, DIVISION C.**

#### **Regulations.**

**These diseases** shall be reported by the person held responsible, and in accordance with the method set forth in Section II, "Records and Reports."

**Placard.** None.

**Isolation.** None.

**Quarantine.** None.

**Concurrent Disinfection.** None.

**Terminal Disinfection.** None.

**It shall be the duty of the health officer having jurisdiction to make an investigation of predisposing and causative factors, and to institute such measures as will prevent a further occurrence.**

## SECTION X.

### MEASURES FOR THE CONTROL OF DISEASES ENUMERATED IN SECTION I, DIVISION D.

#### Regulations.

These diseases shall be reported in accordance with the method set forth in Section II, "Records and Reports."

It shall be the duty of the health officer having jurisdiction to make an investigation of predisposing and causative factors. He shall report in detail his findings to The State Board of Health, together with his recommendations.

---

## SECTION XI.

### DISEASES IN ANIMALS.

**Authority of State Board of Health.** (See Revised Statutes, 1939, Section 9736.)

**Authority of State Veterinarian.** (See Revised Statutes, 1939, Sections 14190-14233.)

**Authority of Cities and Counties—Control of Mad Dogs.** (Revised Statutes, 1939, Sections 14538-14545.)

#### COMMUNICABLE DISEASES IN ANIMALS NOT TRANSMISSIBLE TO MAN.

Health officers shall take cognizance of these diseases, and shall report their occurrence to either the State Veterinarian or the Local Deputy State Veterinarian. A copy of this report shall be sent to the State Board of Health.

#### DISEASES IN ANIMALS TRANSMISSIBLE TO MAN.

#### Regulations.

**Veterinarians shall report** to the health officer, on forms supplied for the purposes, all cases of actinomycosis, anthrax, foot and mouth disease, glanders, rabies, and tuberculosis coming to their notice, together with the name and address of human contacts.

**Health Officers** shall take cognizance of these diseases, and shall report their occurrence to either the State Veterinarian or the local Deputy State Veterinarian. A copy of this report shall be sent to the State Board of Health. Pending the arrival of the State Veterinarian or one of his deputies, health officers shall institute the following control measures:

**Actinomycosis.** Diseased animals shall be segregated. All surfaces soiled with discharges shall be thoroughly disinfected. Sale of milk from infected animals is prohibited. Sale of meat from infected animals prohibited unless slaughtering is done under local official or federal supervision.

**Anthrax.** Diseased animals shall be segregated. All surfaces soiled with discharges shall be thoroughly disinfected. All animals shall be placed in quarantine, and no person shall be allowed to leave the premises without disinfecting his shoes and clothing. The entire carcass of animals dying of anthrax shall be burned. The sale of milk from infected premises is prohibited. The sale of milk, meat, hides, and hair from infected animals is prohibited.

**Foot and Mouth Disease.** Diseased animals shall be segregated. All surfaces soiled with discharges shall be thoroughly disinfected. Animals on the premises shall be quarantined, and no person shall be allowed to leave the premises without disinfecting his shoes and clothing. The entire carcass of animals dying of foot and mouth disease shall be burned. The sale of milk from infected premises is prohibited. The sale of milk, meat, hides, and hair from infected animals is prohibited.

**Glanders.** Diseased animals shall be segregated. All surfaces soiled with discharges shall be thoroughly disinfected. Horses shall not be allowed to leave the premises until they have been tested by specific reaction, and until terminal disinfection of stable has been accomplished.

**Rabies.** Suspected animals shall be segregated for a period of fifteen days unless symptoms of rabies develop sooner. City and county authorities should be urged to pass regulations for the control of rabies in accordance with authority granted for the control of rabies. Rabid animals shall be killed and the heads sent to the State Board of Health laboratories, or a laboratory authorized by the State Board of Health to make such examinations. All surfaces soiled with discharges shall be thoroughly disinfected.

**NOTE:** When killing animals care should be taken not to damage head or brain. Specimens shall be shipped in accordance with directions contained in bulletin "Laboratory Service, State Board of Health of Missouri."

**Tuberculosis.** Diseased animals shall be segregated. All surfaces soiled with discharges shall be thoroughly disinfected. Sale of milk from infected animals is prohibited. Sale of meat from infected animals is prohibited except when slaughtering is performed under local official or Federal authorities.

---

## SECTION XII.

### DISINFECTANTS AND INSECTICIDES.

**When and Where to Use Disinfectants.** Persons concerned with the care and management of communicable disease should bear in mind that, with the exception of diseases of animals directly transmissible to man, human beings are the reservoirs of their own infections. The infectious material leaves the body by way of its secretions, excretions, and discharges from lesions. Therefore, if human secretions, excretions, and discharges are sterilized the chain of infection is broken. In practice, however, it is not always possible to do this, and consequently disinfection must include the proper treatment of articles and things soiled by these secretions, excretions, and discharges.

### DISINFECTION BY PHYSICAL MEANS.

**Cleaning** by the use of soap and water, or water to which is added disinfectant solution mechanically removes organic matter containing infectious material.

**Drying.** Since moisture is necessary to germ life, drying is inimical to germ life. As a practical measure it has very definite limitations.

**Sunlight** is a powerful germicide. Its limitations however, owing to the variability of intensity of light, and the physical properties of light, should be borne in mind. Time element, too, is a factor, since prolonged exposure to direct sunlight is necessary.

**Burning** is a perfect germicide. Its range of usefulness is limited, since only articles of little value can be subjected to this treatment.

**Dry Heat.** A temperature of 66 degrees C.—150 degrees F. for one hour will destroy germ life.

**Boiling Temperature** for one hour will destroy all germ life, and this temperature maintained for ten minutes will destroy all pathogenic bacteria, and most of the spores. When cutting instruments are subjected to this treatment, 1 per cent carbonate of soda should be added.

**Steam.** Materials subjected to fifteen pounds pressure for twenty minutes preferably in a partial vacuum, will be adequately sterilized. This procedure, however, should not be attempted without special apparatus for the purpose.

### LIQUID CHEMICAL DISINFECTANTS.

**Disinfecting Solution.** Formalin, 5%; cresol, 2%; chloride of lime 5% or other chemical solutions having a disinfecting strength equal to 5% phenol (carbolic acid).

To make 5% solution:

- Add 6½ teaspoonfuls to 1 pint of water.
- Add 13 teaspoonfuls to 1 quart of water.
- Add 13 tablespoonfuls to 1 gallon of water.

To make 2% solution of cresols (liquor cresolis comp.), add 5 teaspoonfuls to 1 quart of water.

**Disinfecting Stools Use.** The stools and disinfectant must be well mixed and allowed to stand for one hour before final disposal in sewer, or privy vault and must be protected against flies while standing. Stools after disinfection must never be thrown on the ground or into a stream. They may be buried at least one foot under ground. Add one of the following chemical solutions equal in volume to the stool:

Chloride of Lime Solution.....	5%
Carbolic Acid Solution.....	5%
Cresol Solution.....	2%

**For Urine.** Add 2 tablespoonfuls carbolic acid, chloride of lime or one tablespoonful of cresol to each pint. Allow to stand thirty minutes. Do not throw on ground or in a stream.

**For Sputum.** Any of the solutions recommended for stools, but burn if possible.

**For clothing, bed-linens, towels, etc.** If soiled by stools, blood, pus or other discharges use;

Carbolic acid, 5%; equals 2 ounces (8 tablespoonfuls) per gallon.  
Cresol, 2%; equals  $\frac{2}{3}$  ounces per gallon (2½ tablespoonfuls).  
Completely immerse for at least one hour.

If not soiled by any of the above the following may be used:

Boil for one-half hour or use Carbolic Acid, 3% to 5% (6 to 8 tablespoonfuls per gallon of water); or use Cresol, 1% to 2% (1½ to 2½ tablespoonfuls per gallon of water).

**For Hands.** Soap, hot water and brush for five to ten minutes followed by Cresol, 1%; Carbolic Acid, 3%; Alcohol, 70%. Immerse for 3 to 5 minutes.

### GASEOUS INSECTICIDES.

**Sulphur Dioxide** is recommended for the destruction of all insects, and for rats and mice. In order to obtain the proper concentration of the fumes, two pounds of sulphur should be used for each 1000 cubic feet of space. Crude sulphur should be finely powdered, and placed in a suitable container, such as a dutch oven with not more than thirty pounds in each oven. This oven is placed in a tub containing a few inches of water. The sulphur can be ignited by using cotton-waste saturated with alcohol. At least two hours exposure is required to kill animal and insect life.

**Hydrocyanic Acid Gas** is dangerous to human life and should not be used for dwellings except in the hands of experts trained in the use of such gases.

**DDT** in a 5% solution, used as a spray, is a lethal insecticide. Sprayed on walls and screens, it remains effective several months unless washed off. It is useful in exterminating mosquitoes, ticks, bedbugs and cockroaches. As a powder in 5% concentration, it can be used in delousing clothing and individuals.

### CONCURRENT DISINFECTION.

**Normal and Abnormal Discharges** from eyes, ears, mouth, nose, skin, lesions and glands should be collected on bits of cotton, paper, or cloth, and burned at once, care being taken by the attendant to prevent contamination of hands.

**Hair and Skin** of patient or attendant may be cleaned by washing with soap and water. The water after use should be boiled or disinfected by adding freshly opened chloride of lime or other disinfectant of equal strength.

**Bed and Body Linen** as taken from patient should be placed in a wash boiler or tub one-third full of cold water. Once a day it should be boiled for fifteen minutes. The clothes so treated may then be hung out to dry. In order to prevent permanent staining of soiled materials, they should be wrapped in a sheet saturated with a solution of bichloride of mercury and immersed in a 3 per cent soap solution, and heated to 50 degrees C.—122 degrees F. for three hours. If soiled with albuminous matter, the wash may be immersed in a solution of bichloride of mercury 1-1,000 with the addition of common salt. After the preliminary disinfection the articles are boiled for half an hour.

**Dishes, Glassware, Knives, Forks, Spoons**, and other utensils used in feeding the patient, should be promptly disinfected by boiling. Dishes used by the patient should not be used by other members of the family.

**Food.** Remnants of food should be collected and boiled or burned at once.

**Thermometer, Rectal Tubes, Douche Nozzles, Etc.**, should not be removed from the sick room until the termination of the case. They should be washed clean with soap and water after each use and kept immersed in denatured alcohol or other disinfectant when not in use.

**Bowel Discharges.** Disinfection of bowel discharges shall be carried out by adding three tablespoonfuls of freshly opened chloride of lime to a liquid stool and stirring the mixture until all parts of the stool have been thoroughly mixed with the disinfecting agent. This mixture should be allowed to stand protected from the flies for thirty minutes before being discharged into a sewer or privy vault.

Solid stools should have one quart of water added, and be thoroughly stirred until the stools assume a liquid character and all lumps broken, and then treated as described above.

**Urine.** Add three tablespoonfuls of freshly opened chloride of lime to each passage, and allow this mixture to stand thirty minutes before being discharged into a sewer or privy vault.

**Bed Pans and Urinals** must be thoroughly cleaned after each usage, and left containing a small amount of chloride of lime. These receptacles should be kept away from flies.

**Hands of Attendant** should be thoroughly washed with soap and water and then rinsed with a disinfectant solution.

#### **TERMINAL DISINFECTION.**

**Rooms.** The treatment varies somewhat with the nature of the infection. In cases of yellow fever, dengue, malaria, plague, the entire building should be subjected to the fumes of sulphur dioxide. After every case of communicable disease, carpets, rugs, upholstered furniture, mattresses, pillows, quilts, or similar articles which have become contaminated with infected discharges, should be thoroughly saturated with a 10 per cent solution of formalin. They should then be gone over with a vacuum cleaner, and finally hung in the sun for a day or two. All rubbish, wound dressings, should be gathered and burned. Door knobs, bed rails, and other surfaces handled by the patient or soiled with the discharges should be wiped with bichloride of mercury or carbolic acid solution. Finally the room should be given a cleaning, sunning and airing, and preferably followed by renovation with paper and paint.

**Bed and Body Linen.** Towels and other articles of like nature should be boiled. In order to prevent the permanent staining of soiled materials they should be wrapped in a sheet saturated with a solution of bichloride of mercury and immersed in a 3 per cent soap solution, and heated to 50 degrees C.—122 degrees F. for three hours. If soiled with albuminous matter the wash may be immersed in a solution of bichloride of mercury 1 to 1,000 with the addition of common salt. After this preliminary disinfection the articles are boiled for half an hour.

**Books, Papers, Magazines, and Toys** of little value should be burned. Books of greater value shall be withdrawn from circulation for thirty days and exposed to direct sunlight for at least twenty-four hours in such a manner as to give the greatest possible exposure to all surfaces or, preferably, where practicable, exposed to formaldehyde fumes in a suitable chamber.

#### **FUMIGATION.**

**NOTE:** Fumigation as ordinarily practiced does not provide for a sufficient concentration of gas to destroy germ life. Its efficacy, even under ideal conditions is seriously questioned by many health authorities. In view of these facts the State Board of Health does not recognize fumigation as a means of destroying germ life.

## SECTION XIII.

### CARE AND USE OF BIOLOGICAL PRODUCTS.

In order to insure uniform results from the use of these products the following regulations should be observed.

**Expiration Date.** This appears on every unbroken package. It should be observed and no product should be used after the expiration date as stated on the package.

**Temperature.** All biologies should be kept in a refrigerator at a constant temperature around 10 degrees C.—50 degrees F. (Exceptions noted below.) Small pox vaccine should be preserved below freezing up to the hour of vaccination. (Vaccine can be conveniently stored in freezing units of refrigerators.) Shipment should be made between cakes of dry ice.

**Quantity.** In the absence of urgent need such as epidemics it is good practice to purchase these products in comparatively small quantities, renewing the stock as frequently as possible, thereby keeping the stock fresh at all times. This particularly applies to smallpox vaccines.



# INDEX

## —A—

	Page
Actinomycosis.....	8, 16, 23
In animals.....	64
Specific measures for control of.....	23
Acute infectious conjunctivitis.....	8, 24
Incubation period.....	24
Specific measures for control of.....	24
Anchylostomiasis (Hookworm).....	8, 24
Specific measures for control of.....	25
Animals, diseases in.....	64
Anthrax.....	8, 15, 25
In animals.....	64
Incubation period.....	25
Specific measures for control of.....	26
Antitoxin, immunity.....	29
Attendants to wear gowns.....	15
Authority, State Board of Health to designate infectious diseases.....	7
Authorized Agent of State Board of Health.....	11

## —B—

Barbers, communicable disease restrictions.....	15
Biologicals, care of.....	69
Blindness, prevention of.....	15, 60
Bodies of dead, classification of.....	15
Books, disinfection of.....	15
Bowel discharges, disinfection of.....	66, 67
Brushes, shaving, sterilization of.....	18
Burial of bodies of infected animals.....	64
Burial of infected human bodies.....	17

## —C—

Carrier, definition of.....	11
Carriers, management of.....	15
Cerebro spinal meningitis.....	8, 16, 37
Chancroid.....	9, 16, 59
Incubation period.....	59
Chicken pox.....	8, 16, 26
Incubation period.....	26
Specific measures for control of.....	26
Chiropodists, communicable disease restrictions.....	15
Cholera.....	8, 15, 26
Incubation period.....	27
Specific measures for control of.....	27
Telegraphic report.....	27
Cities 75,000 or over, laws relating to.....	8
Classification of dead bodies.....	15
Common carriers, duties of.....	14
Common drinking cup, prohibited.....	15
Common towel, prohibited.....	19

	Page
Communicable diseases, regulations for the prevention and control of.....	7
Concurrent disinfection.....	67
Conjunctivitis, acute infectious.....	8, 16, 24
Contact, definition of.....	11
Management of.....	15
Cosmeticians, communicable disease restrictions.....	15
Culture, definition of.....	11
—D—	
Dairy farm, defined.....	11
Dead bodies, classification of.....	15
Transportation of.....	16
Definitions.....	11
Dejecta, disposal of.....	17
Delivery to infected premises.....	18
Dengue.....	8, 16, 28
Incubation period.....	28
Specific measures for control of.....	28
Deputy state commissioner of health in cities less than 75,000 population ..	7, 8
Designate quarantine area.....	22
Diagnosis, how established.....	19
How changed.....	19
Diphtheria.....	8, 16, 28
Immune to, when.....	12
Incubation period.....	29
Period of communicability.....	29
Specific measures for control of.....	29
Diseases excludable from schools.....	14
Diseases in animals.....	64
Diseases reportable.....	8
Who shall designate.....	7
Disinfectants and insecticides.....	65
Disinfection—	
By chemicals.....	66
By DDT.....	67
By physical means.....	65
Concurrent.....	67
Definition of.....	12
Rooms.....	68
Terminal.....	68
Dogs, annual immunization of.....	44
Duties and jurisdiction of local health officers.....	7
Duties of local health officer.....	7
Dysentery.....	8, 16, 29-30
Incubation period.....	30
Specific measures for control of.....	30
—E—	
Embalmers, duties of.....	11, 17
Encephalitis, infectious.....	31
Classification of dead bodies.....	15
Common carriers, duties of.....	14

	Page
Common drinking cup, prohibited.....	15
Erysipelas.....	16
Examinations, laboratory.....	11, 20

—F—

Favus.....	8, 31
Fever, scarlet.....	9, 16, 46
Typhoid.....	9, 16, 52
Typhus.....	9, 16, 54
Yellow.....	9, 16, 56
Food handlers, health of.....	18
Fumigation, definition of.....	12, 67, 68
Funerals, who shall attend.....	17

—G—

Gaseous insecticides.....	67
General vaccination.....	47
German measles.....	8, 16, 32
Incubation period.....	32
Specific measures for control of.....	32
Giving certificates of freedom from venereal diseases prohibited.....	57
Glanders.....	8, 16, 32
In animals.....	65
Incubation period.....	33
Specific measures for control of.....	33
Gonorrhea.....	9, 16, 60
Incubation period.....	60
Specific measures for control of.....	60
Granuloma Inguinale.....	9, 62
Incubation period.....	63
Specific measures for control of.....	63
Graves, depth of.....	17

—H—

Health Officers—	
Definition of.....	12
Duties of.....	7, 14
Hookworm, specific measures for control of.....	25
Hospitalization.....	18

—I—

Immunity—	
Definition of.....	12
Toxin—Antitoxin.....	29
Toxoid.....	29
Alum precipitated toxoid.....	29
Immunization, for prevention of—	
Cholera.....	28
Diphtheria.....	29
Measles.....	37
Paratyphoid.....	39

	Page
Plague.....	40
Rabies.....	44
Rocky Mountain spotted fever.....	45
Scarlet fever.....	46
Small pox.....	47
Tetanus.....	48
Typhoid.....	53
Typhus.....	54
Whooping cough.....	56
Yellow fever.....	57
Incubation period, defined.....	13
Influenza.....	8, 16, 33
Epidemic, specific measures for control of.....	33
Incubation period.....	33
Interment of infected human bodies.....	17
Interstate travel of infected persons.....	19
Isolation, defined.....	13
Jurisdiction of local health officers.....	7
Obstructing health officer.....	22
Of indigent persons.....	22
Procedure for imposing.....	21
Procedure for terminating.....	21
Persons authorized to impose.....	21
Wage earners.....	22
—K—	
Kerato Conjunctivitis.....	8, 34
Incubation period.....	34
Specific measures for control of.....	34
—L—	
Laboratories to report monthly.....	11
Laboratory examinations.....	20
Heads, rabid dogs to be sent.....	65
Laundry, public.....	18
Leprosy.....	8, 16, 35
Incubation period.....	35
Specific measures for control of.....	35
Liquid, chemicals, disinfectants.....	66
Local health officers, duties and jurisdiction.....	7
Lockjaw (See Tetanus).	
Lymphopathia venereum.....	9, 62
Incubation period.....	62
Specific measures for control of.....	62
—M—	
Malaria—	
Incubation period.....	8, 35, 36
Mode of transmission.....	35
Specific measures for control of.....	36
Malta Fever (See Undulant Fever).	
Management of carriers.....	15
Management of contact.....	15

	Page
Measles.....	8, 16, 36
Incubation period.....	36
Specific measures for control of.....	36
Immunization.....	37
Meningitis, meningococcus.....	8, 16, 37
Incubation period.....	37
Specific measures for control of.....	37
Midwife to report contagious diseases, when.....	10
Milk, sale of.....	18
Mumps.....	8, 16, 38
Incubation period.....	38
Specific measures for control of.....	38
—N—	
Nurse to report contagious diseases, when.....	10
—O—	
Ophthalmia neonatorum (See Acute Infectious Conjunctivitis).	
—P—	
Paratyphoid fever.....	8, 16, 38
Immune to, when.....	12
Incubation period.....	39
Specific measures for control of.....	39
Penalty for violating quarantine.....	7
Physician, duties of.....	13
Placard, warning, quarantine.....	20
Plague.....	8, 16, 40
Incubation period.....	40
Specific measures for control of.....	40
Telegraphic report.....	40
Pneumonia.....	8, 16, 41
Incubation period.....	41
Specific measures for control of.....	41
Pneumonia, primary atypical.....	8, 16, 41
Poliomyelitis.....	8, 16, 42
Incubation period.....	42
Specific measures for control of.....	42
Precautionary measures.....	13
Psittacosis.....	8, 16, 42
Public assemblages.....	18
Puerperal infection.....	9, 43
—Q—	
Quarantine, defined.....	13
Obstructing health officer.....	22
Of indigent persons.....	22
Persons authorized to impose.....	21
Procedure for imposing.....	21
Procedure for terminating.....	21
Wage earners.....	22

## —R—

	Page
Rabies.....	9, 16, 44
In animals.....	65
Incubation period.....	44
Specific measures for control of.....	44
Records and reports, persons required to make reports of contagious diseases.....	10
Repeal of all prior rules and regulations.....	7
Reportable diseases.....	8-10
Who shall designate.....	7
Renovation defined.....	13
Rocky Mountain fever.....	9, 16, 44
Specific measures for control of.....	45
Tick fever.....	44
Rooms, terminal disinfection of.....	68

## —S—

Sale of milk, meat, hides, hair of infected animals prohibited.....	65
Sale of milk, prohibited.....	18
Scarlet fever.....	9, 16, 45
Incubation period.....	46
Specific measures for control of.....	46
Schick test.....	29
School authorities, duties of.....	14
Board may require vaccination.....	14
Certificate for return.....	14
Diseases in home.....	14
Septic sore throat.....	9, 16, 45
Incubation period.....	46
Specific measures for control of.....	46
Shaving brushes, sterilization of.....	18
Sick room, preparation of.....	19
Silver nitrate, use of.....	15
Smallpox.....	9, 16, 46
Immune to, when.....	12
Incubation period.....	47
Specific measures for control of.....	47
Vaccine, care of.....	69
Spitting prohibited, where.....	19
State Board of Health—	
Personnel.....	4
Emergency regulations.....	22
Power to investigate.....	22
Special representative.....	23
Sulphur dioxide fumes.....	67
Superintendents of institutions, duties of.....	14
Suspect, defined.....	13
Susceptibles, defined.....	13
Syphilis.....	9, 16, 61
Incubation period.....	61
Specific measures for control of.....	61

## —T—

	Page
Telegraphic reports to be made on.....	11
Terminal disinfection.....	68
Tetanus (Lockjaw).....	9, 16, 47
Incubation period.....	48
Specific measures for control of.....	48
Towel common, use prohibited.....	19
Toxin antitoxin, immunization.....	29
Toxoid, immunization.....	29
Trachoma.....	9, 16, 48
Incubation period.....	49
Hospital for.....	49
Specific measures for control of.....	49
Transportation of dead bodies, preparation for.....	16
Travel, interstate of infected persons prohibited.....	19
Trichinosis.....	9, 16, 49
Incubation period.....	49
Specific measures for control of.....	49
Tuberculosis.....	9, 16, 50
In animals.....	65
Incubation period.....	50
Specific measures for control of.....	50
Tularemia.....	9, 16, 52
Incubation period.....	52
Specific measures for control of.....	52
Typhoid fever.....	9, 16, 52
Immune to, when.....	12
Incubation period.....	53
Specific measures for control of.....	53
Typhus fever.....	9, 16, 54
Incubation period.....	54
Specific measures for control of.....	54

## —U—

Undertakers (See Embalmers).....	
Undulant fever.....	9, 16, 54
Incubation period.....	55
Specific measures for control of.....	55

## —V—

Vaccination, general, multiple-pressure method.....	47
School boards may require.....	14
Vaccine, smallpox, care of.....	69
Venereal diseases.....	9, 16, 59
Giving certificates of freedom from, prohibited.....	57
Specific measures for control of.....	59, 60, 61, 62, 63
Veterinarians shall report to health officer.....	64
Violating quarantine, penalty of.....	7
Violation of regulations, penalty of.....	7

## —W—

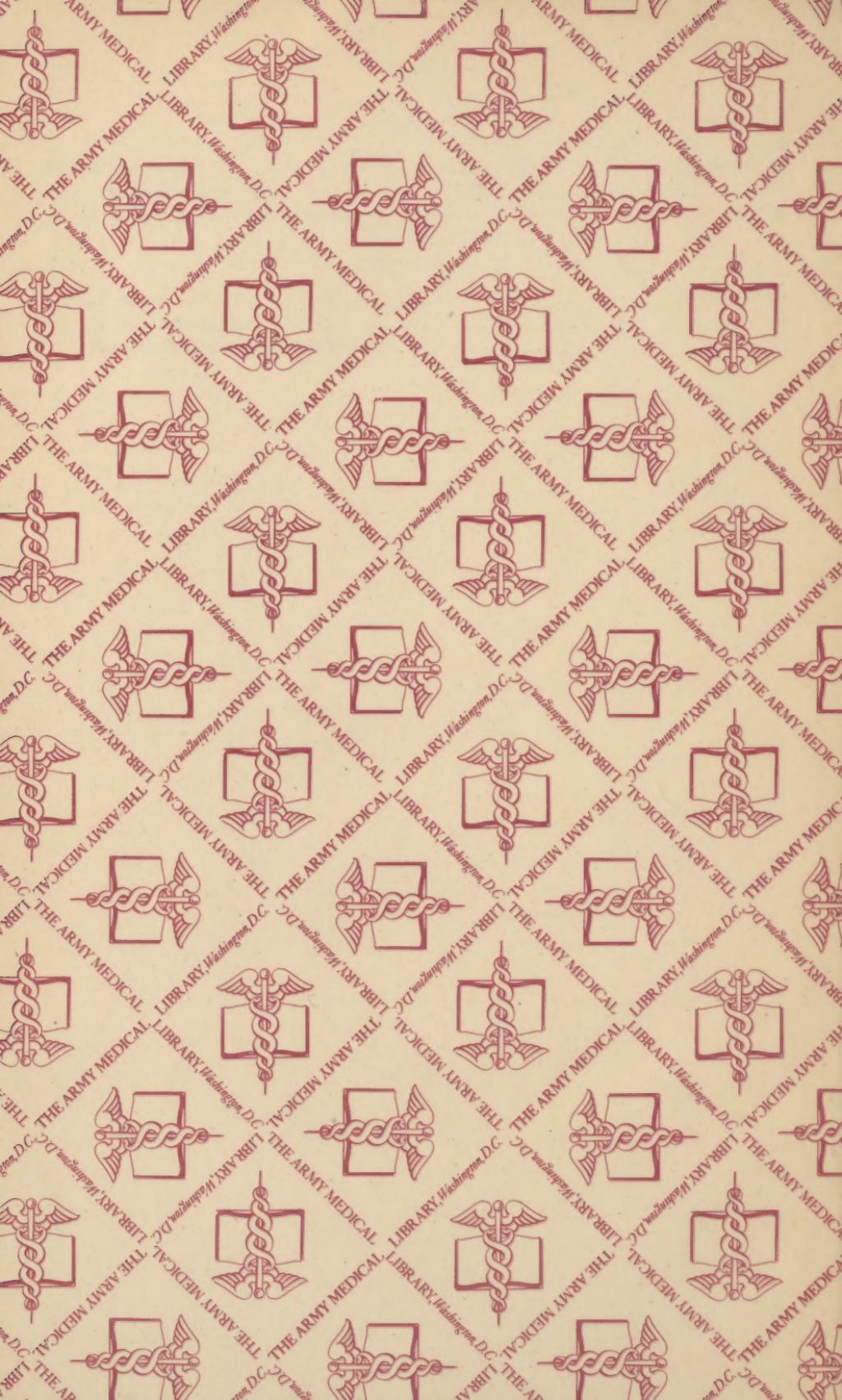
	Page
Whooping cough.....	9, 16, 55
Incubation period.....	56
Specific measures for control of.....	56

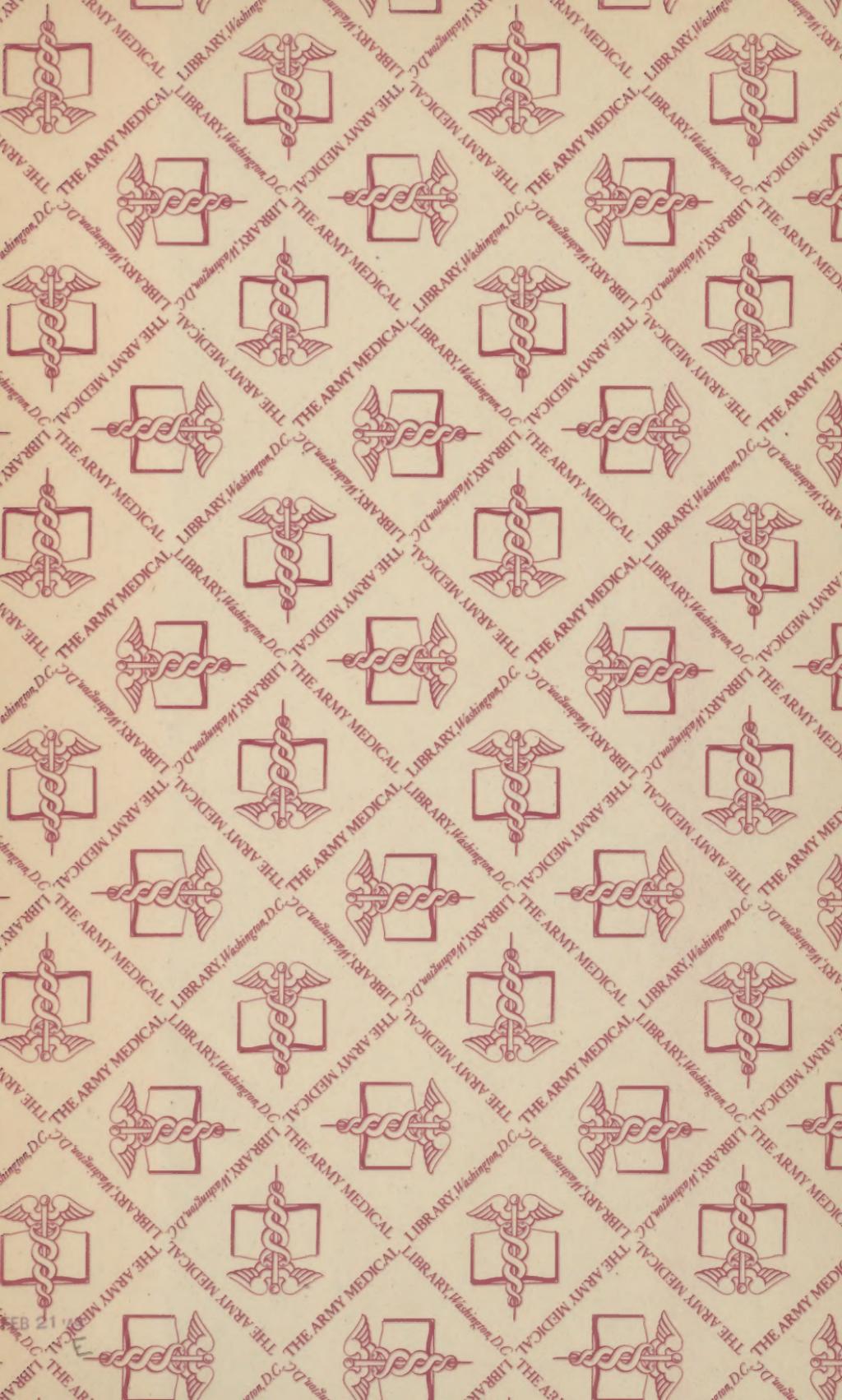
## —Y—

Yellow fever.....	9, 16, 56
Incubation period.....	56
Specific measures for control of.....	57

✓







WA 32 AM8 B6c 1946

29211670R



NLM 05133660 5

NATIONAL LIBRARY OF MEDICINE